SAMSUNG

REFRIGERATOR

BOTTOM MOUNT FREEZER

BASIC : RFG237AA / RFG238AA

MODEL NAME : RFG237AARS RFG238AARS
RFG237AABP RFG238AABP
RFG237AAWP RFG238AAWP
RFG237AAPN RFG238AAPN

MODEL CODE : RFG237AARS/XAA RFG238AARS/XAA
RFG237AABP/XAA RFG238AABP/XAA
RFG237AAWP/XAA RFG238AAWP/XAA
RFG237AAPN/XAA RFG238AAPN/XAA

SERVICE Manual

REFRIGERATOR

RFG238AA

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For the latest parts information, Please access to our service web site
(● North America : http://service.samsungportal.com)

WARNING

IMPORTANT SAFETY NOTICE

The service guide is for service men with adequate backgrounds of electrical, electronic, and mechanical experience. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or dealer cannot be responsible for the interpretation of this information.

SAMSUNG ELECTRONICS AMERICA, INC.

Technical Service Guide

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1. PRECAUTIONS(SAFETY WARNINGS)

● Unplug the appliance before the changing or repairing the electric parts.
→ Be careful the electric shock.

● When exchanging the parts, use the correct parts.
→ Check the model name, rating voltage, rating current, running temperature symbols.

● When troubleshooting, connect firmly the types of harness.
→ Make not to be separated when some power is imposed.

● Check the traces of water infiltration at the electric parts.
→ If there is a trace of water infiltration, exchange or tape the parts.

● Check the assemble status of parts after troubleshooting.
→ It must be in the same assembled state when compared with the state before disassembly.

● Check the use circumstance of refrigerator.
→ If the refrigerator is installed at the place that is damp or wet, or status of installation is unstable, change the installation place.

● Ground the refrigerator properly
→ Particularly, Be sure to earth when there is a risk of an electric leakage by humidity or wetness.

● Do not use multi plugs in a plug socket at the same time.
Check if the power cord and socket is damaged, pressed, squeezed, or fired.
→ If the plug or plug socket is damaged, repair or exchange it immediately.

● Do not allow consumers to repair the appliance by themselves.

● Do not store other materials except the foods.
→ Drugs or scientific materials : difficult to keep precise temperature.
→ The inflammables(alcohol, benzene, ether, LP gas, butane gas etc.): have risk of explosion.

PRECAUTIONS(SAFETY WARNINGS)

Read all instructions before repairing the product and follow the instructions in order to prevent danger or property damage.
Plug out and remove all the items in regrigerator prior to repair.

CAUTION/WARNING SYMBOLS DISPLAYED

Warning	*Indicates that a danger of death or serious injury exists.*
Caution	*Indicates that a risk of personal injury or material damage exists.*

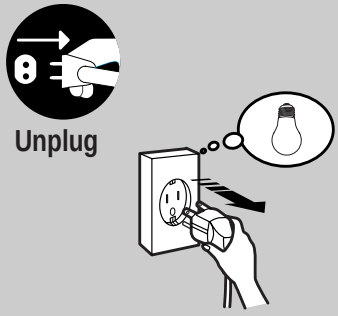
SYMBOLS

means "Prohibited".
means "Do not disassemble".
means "No contact".
means "Warning or Caution".
means "Unplug the unit before preforming service"
means "Earth or Ground".

Warning & Caution

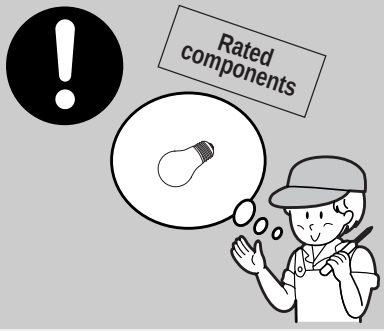
Plug out to exchange the interior lamp.

- ***It may cause electric shock.***



Use the rated components on the replacement.

- ***Check the correct model, rated voltage, rated current, operating temperature and so on.***



On repair, make sure that the wires such as harness are bundled tightly.

- ***Bundle tightly wires in order not to be detached by the external force and then not to be wetted.***

On repair, remove completely dust or other things of housing parts, harness parts, and check parts.

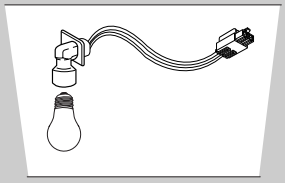
- ***Cleaning may prevent the possible fire by tracking or short.***

After repair, check the assembled state of components.

- ***It must be in the same assembled state when compared with the state before disassembly.***

Check if there is any trace indicating the permeation of water.

- ***If there is that kind of trace, change the related components or do the necessary treatment such as taping using the insulating tape.***



PRECAUTIONS(SAFETY WARNINGS)

✻ Please let users know following warnings & cautions in detail.

Warning & Caution

Do not allow users to put bottles or kinds of glass in the freezer.

- *Freezing of the contents may inflict a wound.*

Do not allow users to store narrow and lengthy bottles or foods in a small multi-purpose room.

- *It may hurt you when refrigerator door is opened and closed resulting in falling stuff down.*

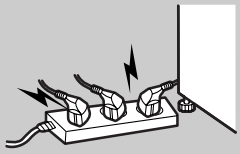
Do not allow users to store pharmaceutical products, scientific materials, etc., in the refrigerator.

- *The products which need precise temperature control should not be stored in the refrigerator.*

Do not allow users to plug several appliances into the same power receptable.

- *May cause abnormal generation of heat or fire.*

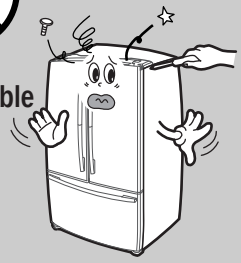
Prohibition



Do not allow users to disassemble, repair or alter.

- *It may cause fire or abnormal operation which leads to injury.*

Do not disassemble



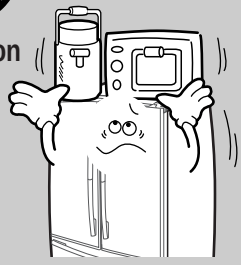
Do not allow users to bend the power cord with excessive force or do not have the power cord pressed by heavy article.

- *May cause fire.*

Do not allow users to store articles on the product.

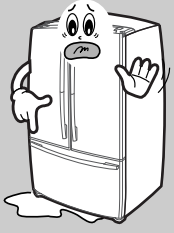
- *Opening or closing the door may cause things to fall down, which may cause injury.*

Prohibition



Do not allow users to install the refrigerator in the wet place or the place where water splashes.

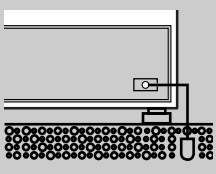
- *Deterioration of insulation of electric parts may cause electric shock or fire.*



Make sure of the earth.

- *Be sure the product is properly grounded.*

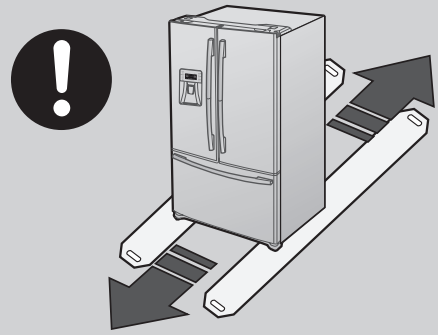
Earth



PRECAUTIONS(SAFETY WARNINGS)

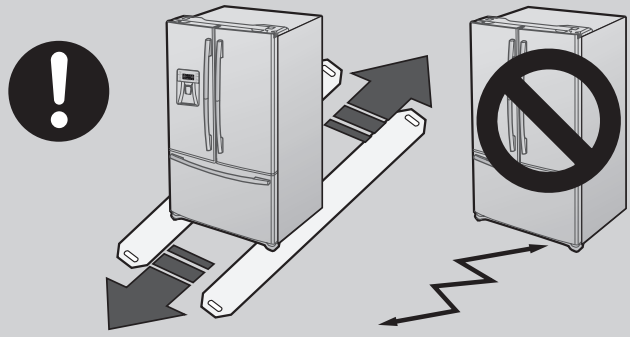
FLOORING

For proper installation, this refrigerator must be placed on a level surface of hard material that is the same height as the rest of the flooring. This surface should be strong enough to support a fully loaded refrigerator, or approximately 660lbs(299kg).



MOVING

Protect the finish of the flooring. Cut a large section of the cardboard carton and place under the refrigerator where you are working. When moving, be sure to pull the unit straight out and push back in straight.



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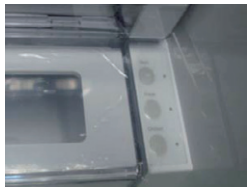
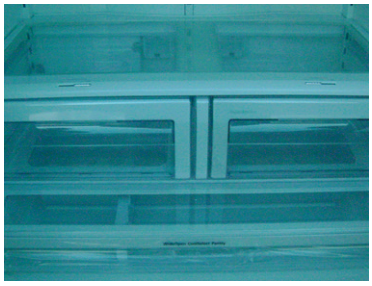
2. PRODUCT SPECIFICATIONS

2-1) Introduction of Main Function

● **A newly developed SAMSUNG bottom mount freezer in 2009 has the following characteristics.**

	Surround Multi Flow • Uniform cooling for each shelf and even in corner in fresh food compartment by centerpositioned fan and duct with multiple flow effluences.
	Twin Cooling System • The refrigerator and the freezer have two evaporators. Given this independent system, the freezer and the refrigerator are cooled individually as required and are, therefore, more efficient. Food odor from the refrigerator does not affect food in the freezer due to separate air flow circulation.
	**Electronic control from outside of Pantry Cover** • Adjustable temperature control ((around 41℉(5℃) : Deli / around 38℉(3℃) : Fresh / around 34℉(1℃) Chilled) Temperature control from outside of the Pantry : user friendly design helps keep foods fresh for longer
	Ice and Water Dispenser • The ice and water dispenser provides ice and cold water at any time.
	Secure Auto Close Door System • Secure Auto Close Door System • Cool tight doors • Energy saving • Preventing sweat on fridge doors
	Easy Handle System • Ez-open Freezer Door • Ergonomic Door Design
	Easy Handle • The freezer door is more user-friendly. So, it comes as much convenient.

2. PRODUCT SPECIFICATIONS

	**Drawer** • The dimension of the right-side drawer is 6:4 (H x W) with the shelf being raised. So, the right-side drawer can be pulled out with the left door closed.
	Dual Ice Maker • 7 cubes ice-Maker(Refrigerator) • 7 cubes ice-Maker(Freezer)

2-2) Specifications

ELECTRICAL SPECIFICATIONS

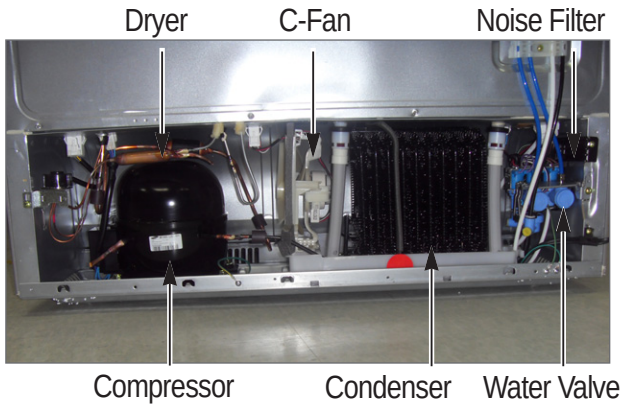
Defrost Control ..... From 24 to 32 hrs
Thermo Bimetal Protector .....140°F(60℃)(off) 104°F(40℃)(on)
Defrost Thermistor(502AT) ..... 50°F(10℃)(off)
Electrical Rating ..... AC115V 60Hz 11.6 Amps
Maximum Current Leakage ..... 0.25 mA
Maximum Ground Path Resistance ..... 0.1 Ohm
Energy Consumption 550KWh/year

NO LOAD PERFORMANCE

Ambient Temperature	70°F(21℃)	90°F(32℃)
Refrigerator,°F	34°F(1℃)~46°F(8℃)	34°F(1℃)~46°F(8℃)
Freezer,°F	-8°F(-22℃)~8°F(-13℃)	-8°F(-22℃)~8°F(-13℃)
Run Time,%	＜40	＜60

REFRIGERATION SYSTEM

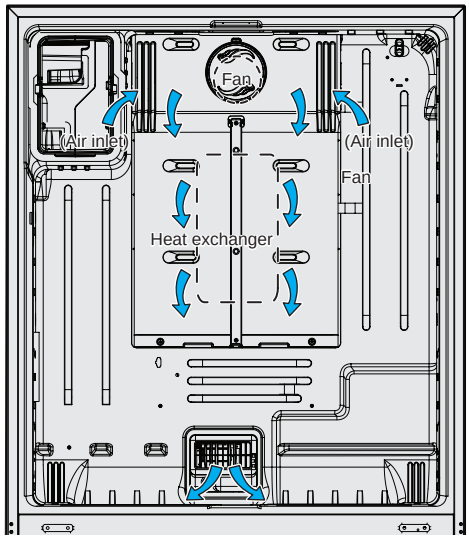
Refrigerant Charge (R134a) ..... 5.64 oz(160g)
Compressor(BK190C-L2C) .....1314 Btu/hr(0.385kw)
Compressor oil ..... Freol α 15c
R Capillary tube(Dia, Length) ..... 0.032 " ,118 " (0.82mm,3500mm)
F Capillary tube(Dia, Length) ..... 0.032 " ,118 " (0.82mm,3500mm)



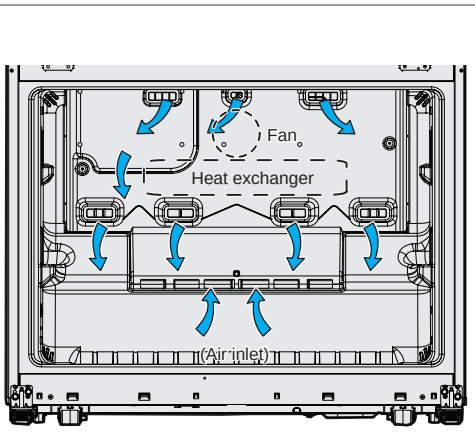
INSTALLATION

Clearance must be provided for air circulation
AT TOP ..... 2 " (51mm)
AT SIDES ..... 3.75 " (95mm)
AT REAR ..... 2 " (51mm)

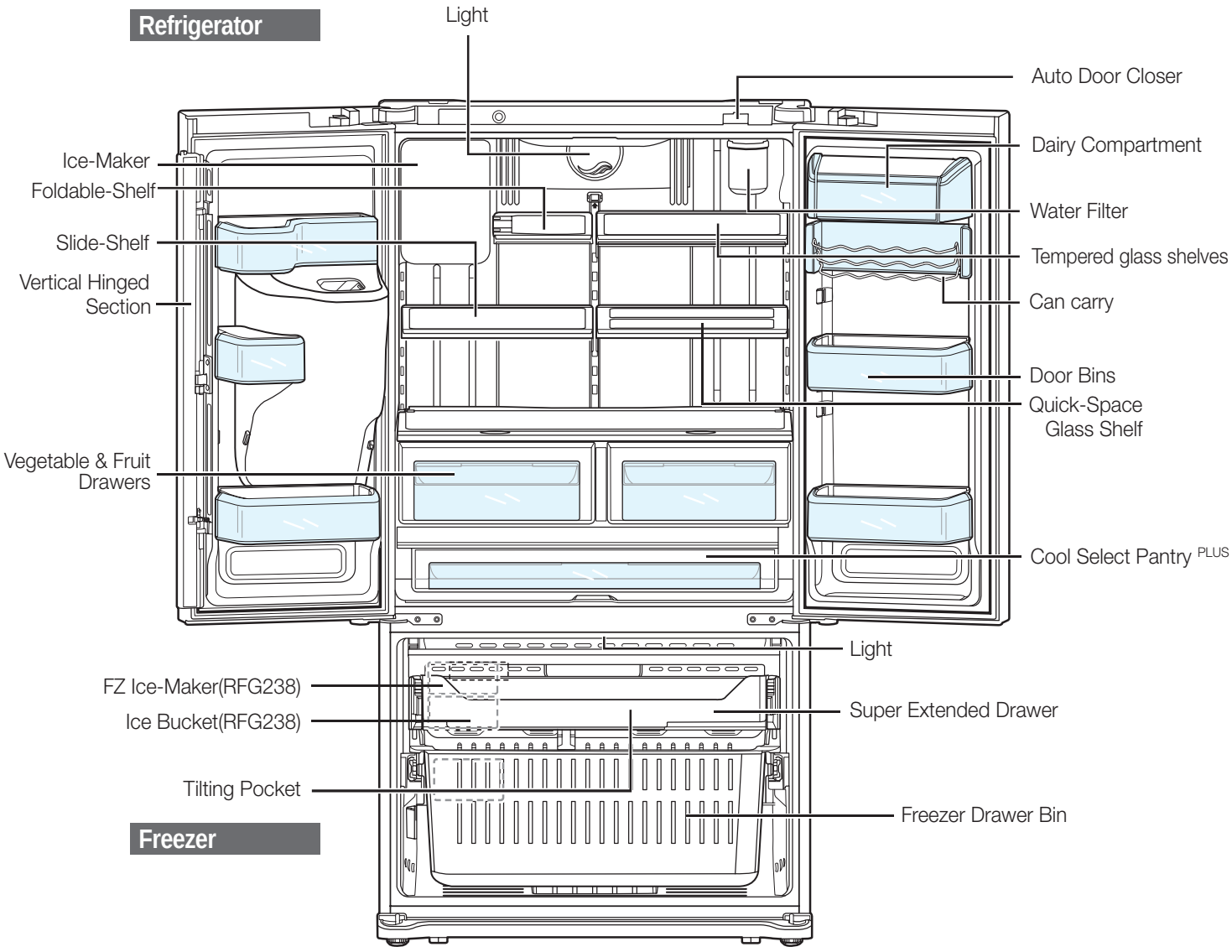
Refrigerator



Freezer



2-3) Interior Views



2-4) Model Specification

ITEM			SPEC	SAMSUNG	SAMSUNG
				RFG238AA	RFG297AB
Appearance					
Product Zone			Cooling Tech	Twin Cooling	Twin Cooling
			Door Shape	Contour	Contour
			Special Room	Cool Select Pantry	Cool Select Pantry
Performance	Cooling Speed(Min)	F-Room	250 ↓	203	199.2
		R-Room	250 ↓	189	197.3
	89.6°F(32°C)	F-Room	-26.0 ↓	-29.4	-28.1
		R-Room	2.0 ↓	1.5	0.7
	109.4°F(43°C)	F-Room	-18.0 ↓	-22.8	-21.5
		R-Room	5.0 ↓	1.0	1.3
	Temperature Distribution (Fridge)	F-Room	2.0 ↓	0.2	0.2
		R-Room	2.0 ↓	0.3	0.3
	Run Time	N-N	70% ↓	64.6	62.5
Noise	Sound Power Level		46dB ↓	45.5	41.0
	Sound Pressure Level		45dB ↓	44.6	38.6

PRODUCT SPECIFICATIONS

2-5) Model Specification & Specification Chart

ITEM	Model		RFG238AA (RFG237AA)
			Ice & Water Dispenser with Pantry
External Size	W		35 6/8 inch(908mm)
	D	On Cabinet	24 7/8 inch(614mm)
		W/O Handle	28 inch (712mm)
		With Handle	30 1/2 inch (774mm)
	H	W/O Hinge Cap	68 1/2 inch(1740mm)
		With Hinge Cap	69 6/8 inch(1774mm)
Net Capacity	Total		22.5 Cu.ft (637.0 ℓ)
	Freezer		6.7 Cu.ft(189.5 ℓ)
	Refrigerator		15.8 Cu.ft(447.5 ℓ)
Efficiency of Volume			55.4%
Weight	Set		313 Pounds (142kg)
	Packing		151Kg (332.9lbs)
Packing	Width		38 1/4inch(974mm)
	Depth		30 5/8inch(776mm)
	Height		75 6/8inch(1925mm)
Compressor			Reciprocate
Rated Frequency and Frequency			AC 115V/60Hz
Refrigerant			R 134a
Foaming Agent			C-Pentane
Refrigerant Input Amount			5.64 oz (160g)
Type Refrigerator			Indirect Cooling Method Refrigerator
Motor Rated Consumption Power			140W
Electric Heater Rated Consumption Power			380W

COLOR			
	Cabinet (Both Side)	Door	Molding
Black	All Black	Empire Black	I Black
Real STS	Noble STS	Real STS	Creamy STS
White	Snow White	Snow White	Snow White
Platinum STS	Noble STS	Platinum Inox	Creamy STS

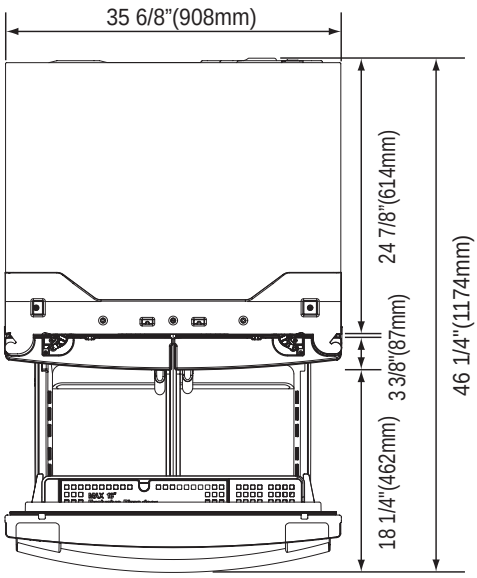
PRODUCT SPECIFICATIONS

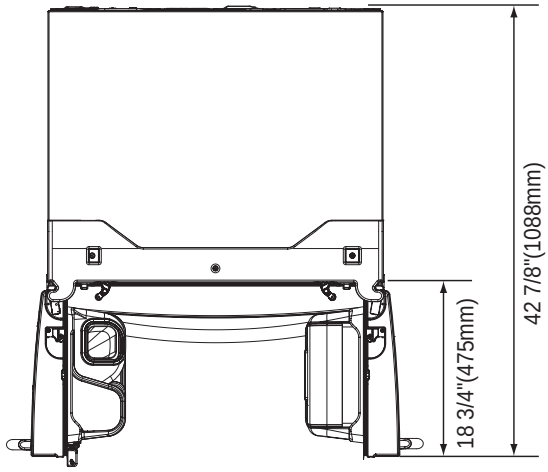
Items				Specification	
Model				RFG238AA (RFG237AA)	
Components for Freezer	Compressor		Model	BK190C-L2C	
			Starting type	BLDC	
			Oil Charge	FREOL α - 15c	
	Evaporator		Freezer	SPLIT FIN TYPE	
			Refrigerator	SPLIT FIN TYPE	
	Condenser			Forced and Natural Convection Type	
	Dryer			Molecular shieve XH-9	
	Capillary tube(Dia x Length)			R : 0.032" x 118" (0.82mm x 3500mm) / F : 0.032" x 118" (0.82mm x 3500mm)	
	Refrigerant			R134a	
Room Temperature Sensor Components	Freezer	Model	Temperature Selection	ON(℉)	OFF(℉)
		THERMISTOR (F-SENSOR) 502AT	-8℉(-22℃)	-5℉(-21℃)	-11℉(-24℃)
			-2℉(-19℃)	1℉(-17℃)	-5℉(-21℃)
			8℉(-13℃)	11℉(-12℃)	5℉(-15℃)
	Refrigerator	Model	Temperature Selection	ON(℉)	OFF(℉)
		THERMISTOR (R-SENSOR) 502AT	34℉(1℃)	36℉(2℃)	32℉(0℃)
			38℉(3℃)	40℉(4℃)	36℉(2℃)
			46℉(8℃)	48℉(9℃)	44℉(7℃)
Defrost Related Components	Defrost Cycle	First Defrost Cycle (Concurrent defrost of F and R)		6hr ±10min	
		Defrost Cycle(FRE)		12~22hr(vary according to the conditions used)	
		Defrost Cycle(REF)		6~11hr(vary according to the conditions used)	
		Pause time		12 ±1min	
	Defrost Sensor	F Defrost-Sensor	Model	THERMISTOR (502AT)	
			SPEC	5.0 KΩ at 77℉(25℃)	
		R Defrost-Sensor	Model	THERMISTOR (502AT)	
			SPEC	5.0 KΩ at 77℉(25℃)	
	Bimetal	F Bimetal-thermo Protector	Rated	AC 125V 10A	
			Operating temperature	Off : 140℉(60℃) / On : 104℉(40℃)	
		R Bimetal-thermo Protector	Rated	AC 125V 10A	
			Operating temperature	Off : 140℉(60℃) / On : 104℉(40℃)	

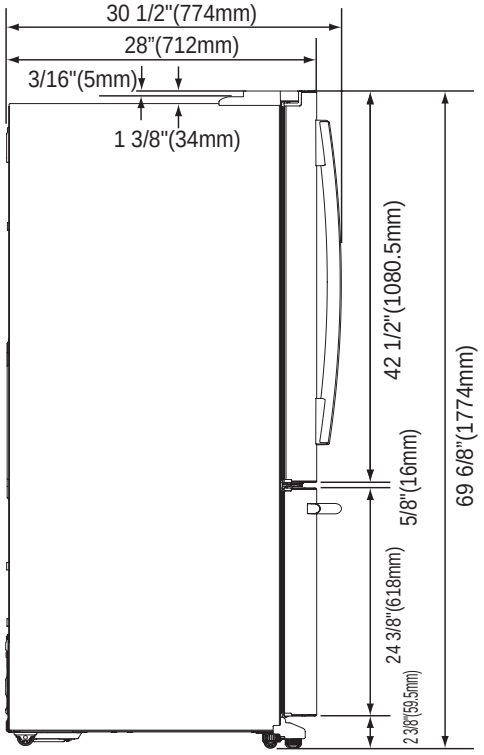
PRODUCT SPECIFICATIONS

Items			Specification
Model			RFG238AA (RFG237AA)
Electric Components	Defrost Heater(FRE)	Heated at F Defrost	AC 115V, 240W
	Defrost Heater(REF)	Heated at R Defrost	AC115V, 120W
	DISPENSER Heater	Interlock with French Heater	AC115V, 1.6W
	FRENCH Heater	-	AC115V, 8W
	ICE Duct Heater	Interlock with Defrost Heater (FRE)	AC115V, 7W
	Water Tank Heater	-	DC 12V, 2W
	Bimetal thermo for Preventing Overheating of Refrigerator Lamp		AC125V 6A / AC250V 3A Off: 140℉(60℃)/ On : 104℉(40℃)
	Over Load Relay	Model	4TM445PHBYY-82
		Temp.ON	156.2 ± 16.2℉(69 ± 9℃)
		Temp.OFF	257 ± 9℉(125 ± 5℃)
	Rated Voltage		AC 115V/ 60Hz
	Motor-BLDC(FRE)		DC12V / DREP5020LC
	Motor BLDC(ICE ROOM)		DC12V / DREP5020LB
	Motor-BLDC(REF)		DC12V / DREP5020LC
	Motor-BLDC(CIRCUIT)		DC12V / DRCP5030LA
	Motor-DAMPER(PANTRY)		DC12V / NSBY001TH1
	Lamp LED (FRE)		DC12V / 95mA~130mA
	Lamp LED (REF)		DC12V / 340mA~445mA
	Lamp LED (VEG)		DC 12V / 60mA
	Door Switch	FRE	AC 125V 1.5A (1EA)
		REF	DC200V 1.5A / MS-406-SS-01(2EA)
		REF(ICE ROOM)	125V / 5A. EMB816
	Power Cord		AC125V 15A
	Earth Screw		STS304

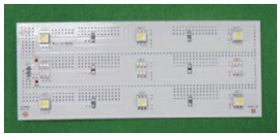
2-6)Dimensions of Refrigerator (Inches)





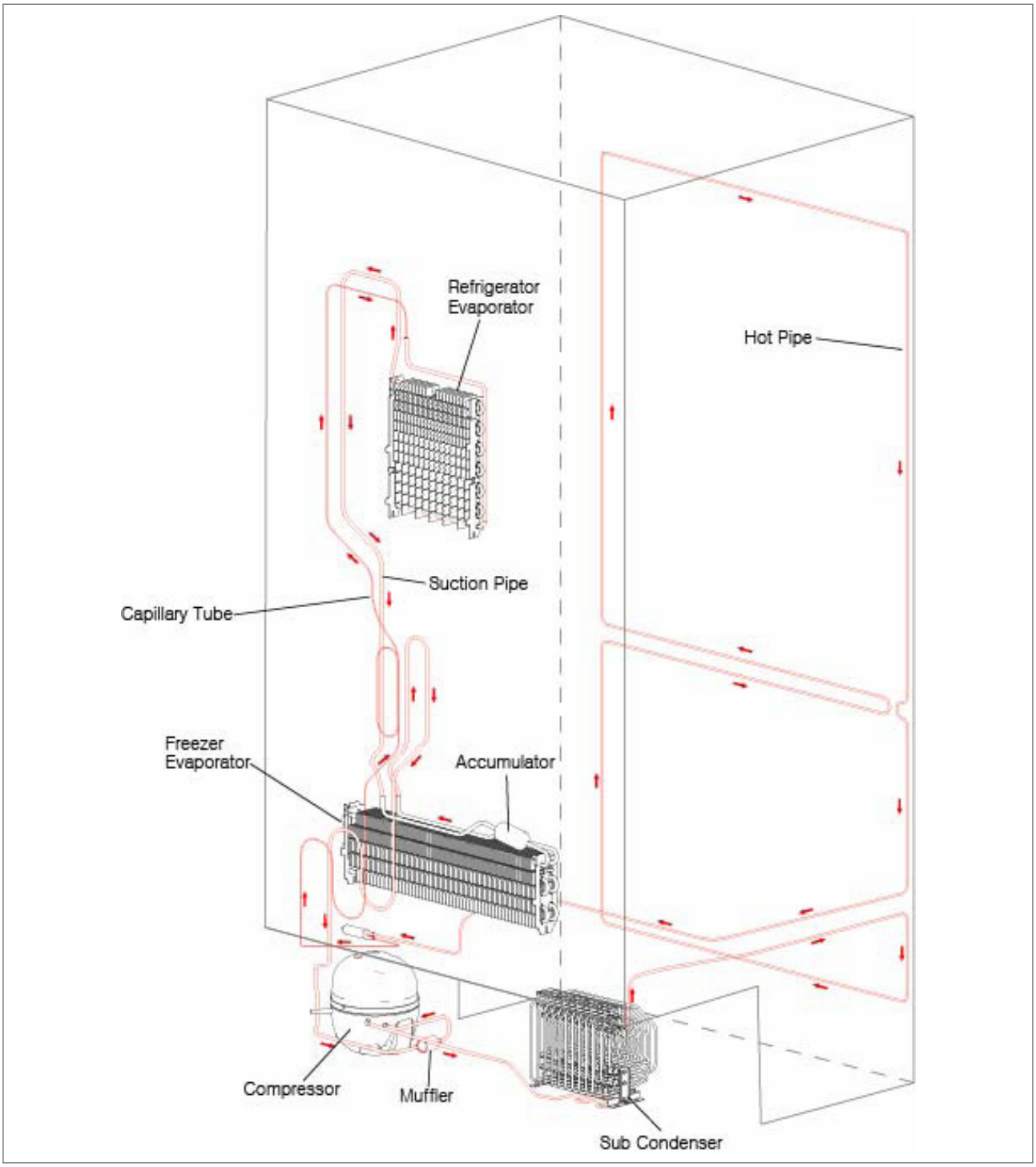


2-7) Optional Material Specification

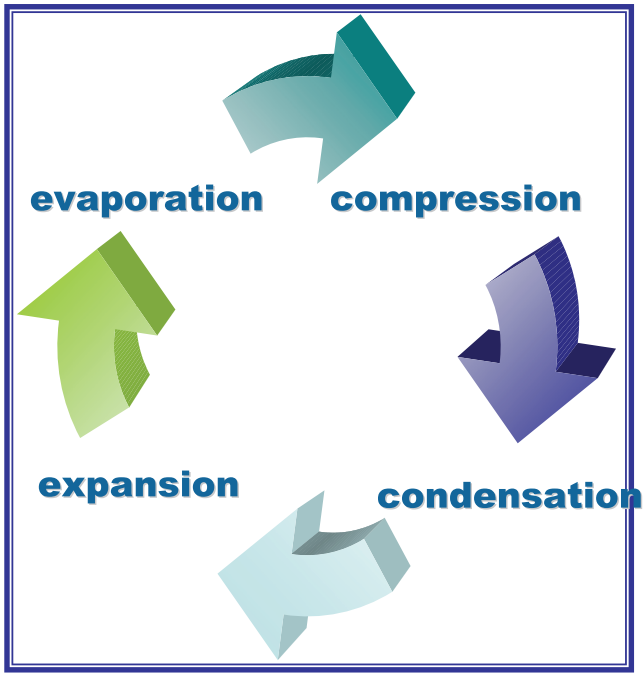
	Part Name	Part Code	AMOUNT
	FILTER WATER-ASSY	DA29-00003G	1
	ASSY-PACKING SUB	DA99-00240S	1
	LED LAMP	DA96-00398G	1
	LED LAMP	DA96-00398J	1

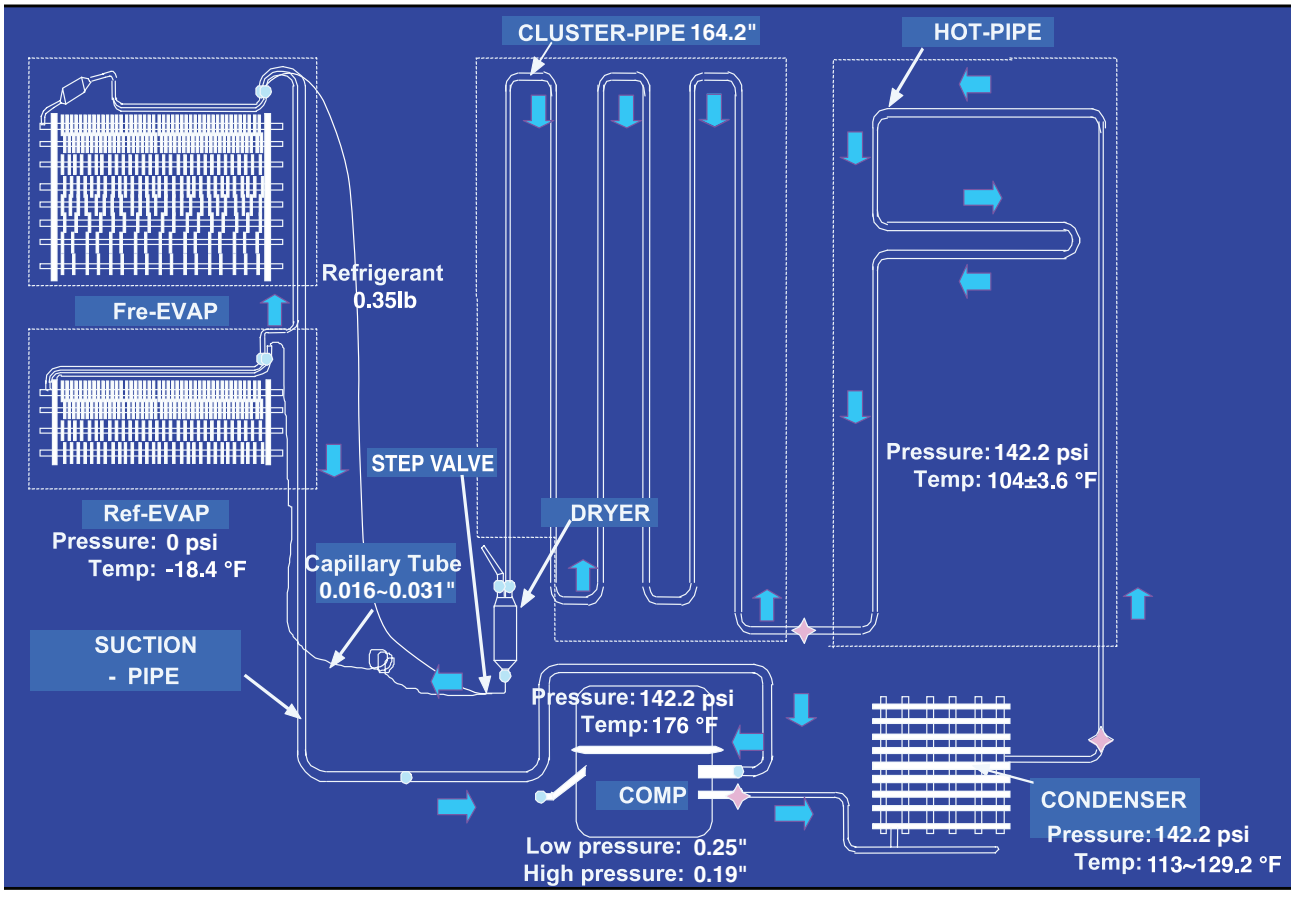
2-8) Refrigerant Route in Refrigeration cycle

1. Compressor → Condenser → Hot Pipe → Back Cluster Pipe → Dryer → Step Valve → R Capillary Tube → Refrigerator Evaporator → Freezer Evaporator → Suction Pipe → Compressor
2. Compressor → Condenser → Hot Pipe → Back Cluster Pipe → Dryer → Step Valve → F Capillary Tube → Freezer Evaporator → Suction Pipe → Compressor



2-8-1. PRINCIPLE OF FREEZEER





2-8-2. Operation theory of refrigeration cycle components

■ Condenser

1) Role: A device which radiates heat to the outside (water/air) to make liquid state for the high temperature / high pressure gas refrigerant discharged from compressor

2) Types

A. Air-cooling Type : Condense air by circulating naturally or manually.

1) Natural Convection Type : Used for the household refrigerator which has small condensing capacity.

2) Manual Convection Type : Circulate air manually by FAN-Motor (Large capacity)

B. Water-cooling Type : Make cooling water pass through the pipe in the condenser (Large capacity)

※ Location

① CLUSTER heat-radiating type : All Pipes effective for radiating heat are formed in the right/left, and front side of refrigerator with hard urethanes and radiate heat through the whole surfaces of cabinet to ambient air.

② Install the condenser on the outside of the product. (An old model)

③ Make them cluster at the lower part of product and radiate heat manually by fan.

☞ Radiate condensed potential heat up to liquefy completely and make change the state without changing the gas temperature itself.

※ Pipe out diameter

① Low pressure: 0.25 ″ ② High pressure : 0.19 ″ ③ Capillary : About 0.075 ″

※ Condenser length : 1113.2 ″

① CONDENSER-PIPE : 633.9 ″ ② HOT-PIPE: 313.9 ″ ③ CLUSTER-PIPE: 165.4 ″

■ Capillary

1. Role: A device which makes low temperature and pressure refrigerant by reducing the pressure the normal temperature / high pressure liquid refrigerant condensed from condenser, and supply it to the evaporator.

A. To evaporate more lower temperature in case of evaporation.

B. It flows to the evaporator without back flowing to condenser, if compressor stops, and the difference of pressure between high pressure and low pressure is small so it is easy to operate the compressor again.

2. Outline

A. Thickness : About 0.075 ″

B. Length : It is changeable to low temperature and pressure depends on the 138 ″ of thin and long copper pipe wall resistance.

2-8-3. Operation theory of refrigeration cycle components

■ Evaporator

1. Role: As the low pressure liquid refrigerant flowed from capillary absorbs heat inside of the refrigerator, it becomes low pressure gas and refrigerate the foods.
2. Theory: The low pressure refrigerant flowed to evaporator operates cooling which takes ambient evaporated potential heat with maintaining the evaporation up to evaporate completely.
3. Types of Evaporator

A. ROLL-BOND Evaporator → Direct Cooling ONE-DOOR Type

☞ Rolled and adhere the 2 aluminum plate and then make refrigerant passage.

B. PIN-PIPE Type → Indirect cooling TWO-DOOR Type

☞ a small aluminum plate on the aluminum pipe to increase the cooling effect.

■ Compressor

1. Role: It operates same as pump which pull out the subterranean water. It inhales the low temperature and pressure refrigerant gas (flowed out) from evaporator and make high temperature and pressure refrigerant liquid in the compressor and send it to the condenser.
2. Type of Condenser
   a. Back-and-forth motion type: A method that pistol makes back-and-forth motion through shaft and cylinder of motor rotation and compresses. ※ Used for household refrigerant
   b. Rotary Type: A method that inhales the refrigerant gas through the gap between the outside of rotor electric attached on the shaft and the inside of cylinder and compresses.
   c. Centrifugal Type
3. Please insert the explanation of inverter comp operation theory.

■ Dryer

1. Role: Absorb the moisture from the refrigerant that refrigeration cycle circulates and eliminate the foreign substance.
2. Structure: If even some moisture is included refrigerant is impossible to circulate by freezing the small capillary outlet, so silica gel or molecular sieve is (included and) sealed to absorb the internal moisture, and install a minute net to eliminate the foreign substance.

2-8-4. Operation theory of refrigeration cycle components

※.Influence of moisture

① Moisture precipitation – Blocked by ice
② Refrigerant and reaction
③ Life reduction of oil
④ Acceleration of oxidization
⑤ Copper plating phenomenon
⑥ Gas dissolution by the interaction of synthetic insulating material (insulator)

※.Influence of foreign substance

① Increase of condensed temperature.
② Increase of temperature.
③ Decrease of cooling efficiency
④ Shorten the life by friction between oil and foreign substance in the compressor.

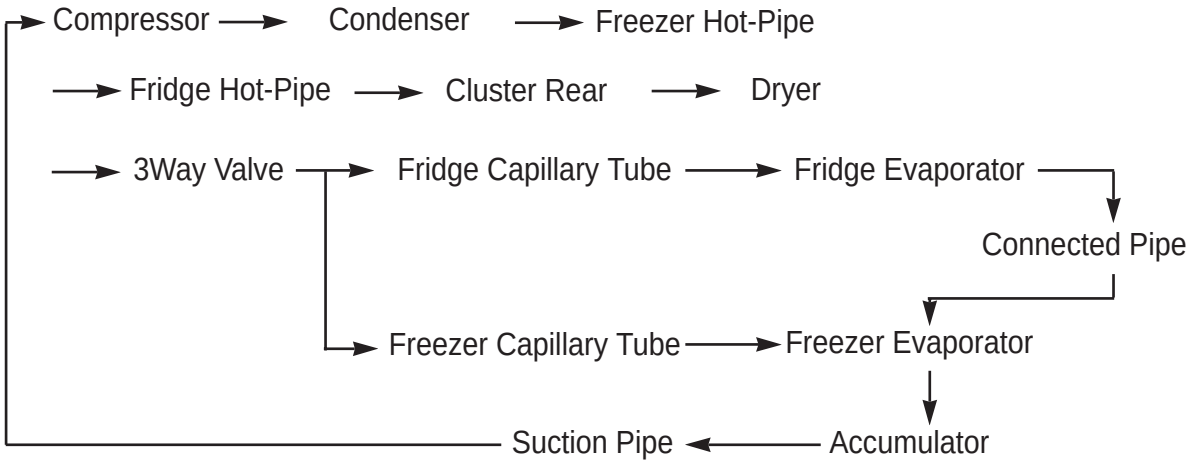
■ Accumulator

1. Role : To send a pure refrigerant gas to compressor by removing completely the refrigerant liquid from evaporator.

※ If a refrigerant liquid go into the compressor, overload is occurred.

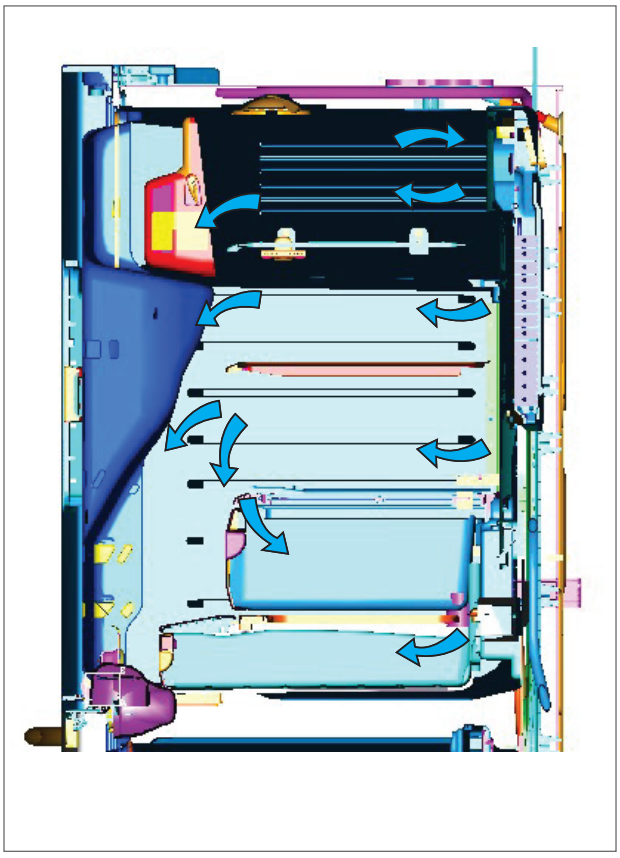
2-8-5. Refrigeration Cycle Type

TDM Cycle

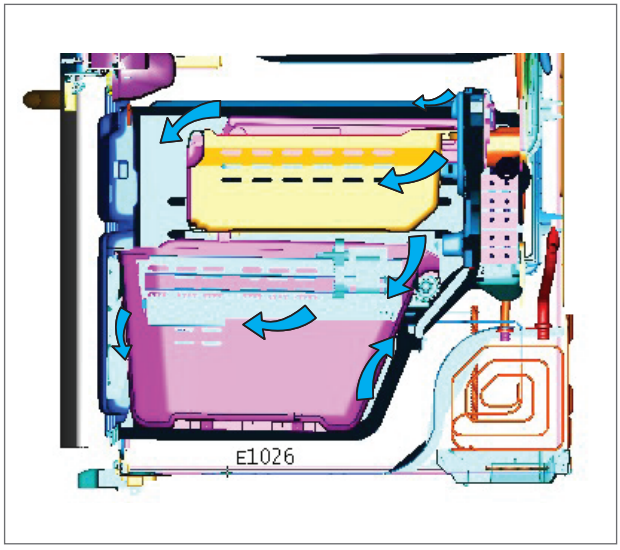


2-9) Cooling Air Circulation

Refrigerator



Freezer



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DISASSEMBLY AND REASSEMBLY

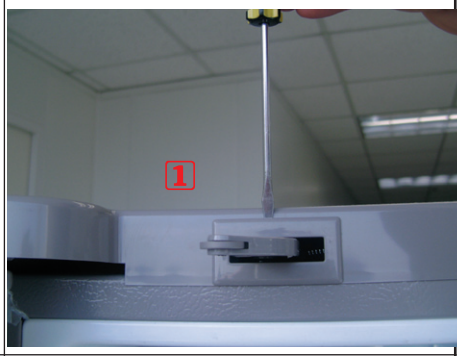
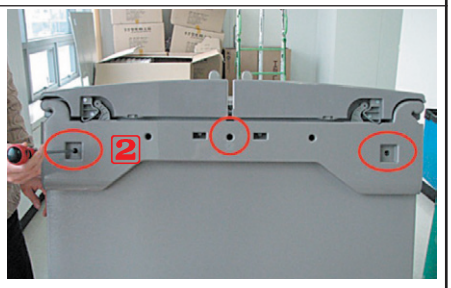
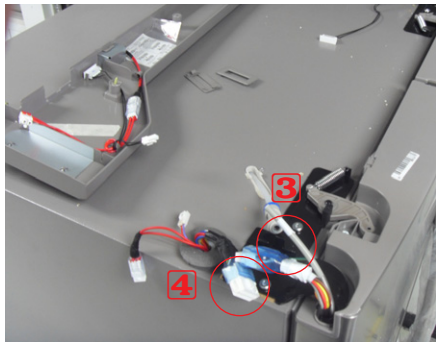
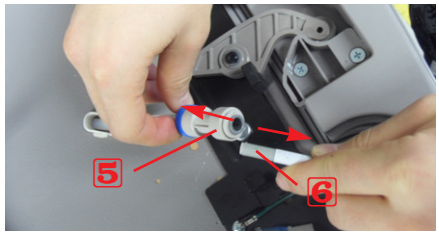
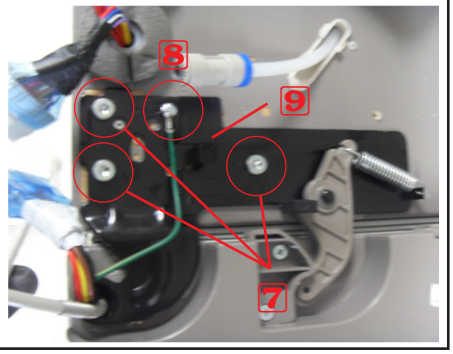
3-1) PRECAUTION

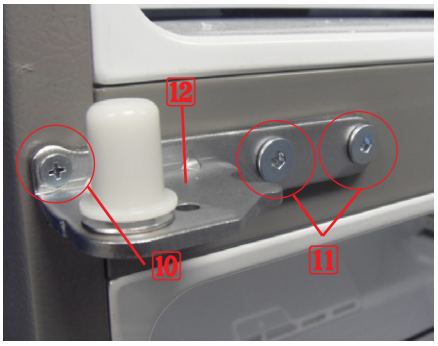
- Unplug the refrigerator before cleaning and making repairs.
- Do not dissemble or repair the refrigerator by yourself.
  - It may cause risk of causing a fire, malfunction and/or personal injury.
- Remove any foreign matter or dust from the power plug pins.
  - Otherwise there is a risk of fire.
- Do not use a cord that shows cracks or abrasion damage along its length or at either end.
- Do not plug several appliances into the same multiple power board. The refrigerator should always be plugged into its own individual electrical which has a voltage rating that matched the rating plate.
  - This provides the best performance and also prevents overloading house wiring circuits, which could cause a fire hazard from overheated wires.
- Do not install the refrigerator in a damp place or place where it may come in contact with water.
  - Deteriorated insulation of electrical parts may cause an electric shock or fire.
- The refrigerator must be grounded.
  - You must ground the refrigerator to prevent any power leakages or electric shocks caused by current leakage from the refrigerator.
- Do not put bottles or glass containers in the freezer.
  - When the contents freeze, the glass may break and cause personal injury.
- Do not store volatile or flammable substances in the refrigerator.
  - The storage of benzene, thinner, alcohol, ether, LP gas and other such products may cause explosions.
- Water whitening phenomenon
  - All water provided to refrigerators flows through the core filter which is an alkaline water filter. In this process, the pressure in the water that has flowed out of the filter gets increased, and massive oxygen and nitrogen become saturated. When this water flows out in the air, the pressure plummets and the oxygen and nitrogen get supersaturated so that they turn into gas bubbles. The water could look misty due to these oxygen bubbles. It is not because dust or chemicals, just a few seconds later, it will be clean again.

- Required Tools

IMAGE	ITEM	USE
	Phillips Head Driver	Use for assembling and disassembling of screw
	Flat Head Driver	Use for assembling and disassembling of HomeBar, Dispenser, Deli Cartessen Box, Main PBA etc...
	Hex Wrench Ø0.08"	Use for assembling and disassembling of Handle
	Socket Wrench Ø0.4"	Use for assembling and disassembling of Door Hinge

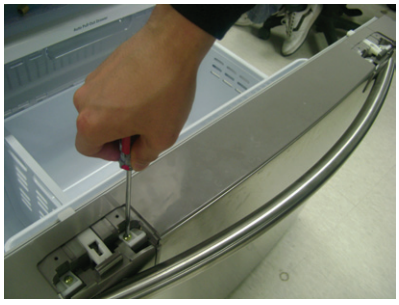
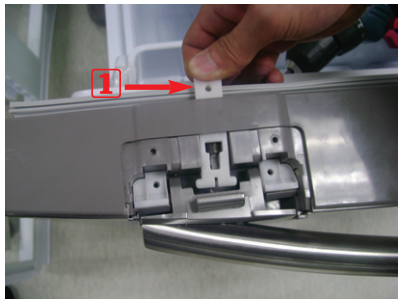
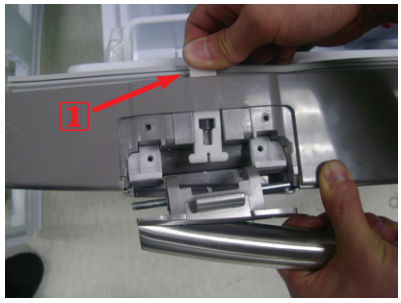
3-2) Refrigerator Door

Part Name	How To Do	Descriptive Picture
Refrigerator Door	1. With the door opened, remove the Top Table cap(1) with a Flat head screwdriver, and close the door.	
	2. Remove the 3 screws holding down the Top Table and remove the Top Table(2).	
	3. Disconnect the electrical onnector(3) above the upper right door hinge and the 3 electrical connectors(4) above the upper left door hinge. Disconnect the fastener in tube fitting(5) and the water tube(6) by pulling the tube fitting(5) apart as shown in the picture.	 
	4. Remove the 3 hex head bolts(7) attatched to the upper left and right door hinges with a Wrench(0.4 "). With a Philips head screwdriver, remove the ground screw(8) attatched to the upper left and right door hinges. Remove the upper left and right door hinges(9).	

Part Name	How To Do	Descriptive Picture
Refrigerator Door	5. Lift the door straightly up to remove.	
	6. With a Philips head screwdriver, remove the screw (⑩) attatched to the lower left and right door hinges. With a wrench(0.4 ″), remove the 2 flat head screws (⑪) attatched to the lower left and right door hinges. Remove the lower left and right door hinges (⑫).	

Part Name	How To Do	Descriptive Picture
COVER VINYL	1. Using a wrench, unscrew the two screws. And disassemble the door handle.	
	2. Remove the cover vinyl of door.	

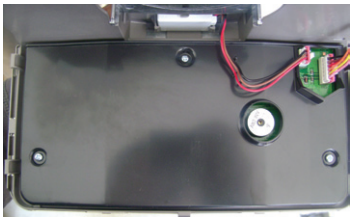
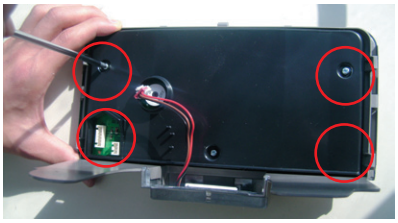
3-3) Door Handle Freezer

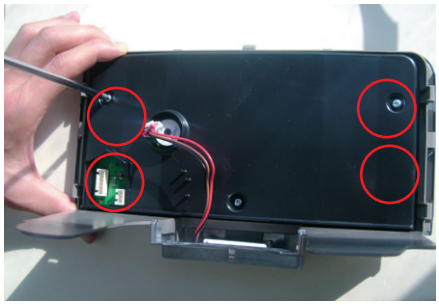
Part Name	How To Do	Descriptive Picture
Door Handle Freezer	1. Remove the Cap Door with a flat-blade(-) screwdriver.	
	2.Remove 4 screws	
	3. Lift up the handle to have the Slider Handle Fre(1) pushed back.	
	4. After having the Slider Handle Fre(1) pushed back, screw up at the hole.	
	5.Remove the door handle by lifting it up.	

3-4) Refrigerator Light

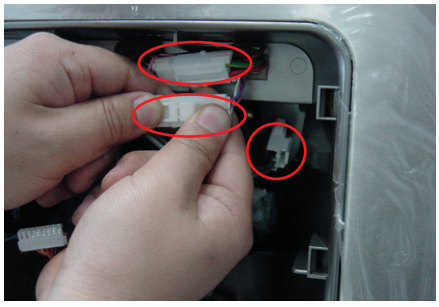
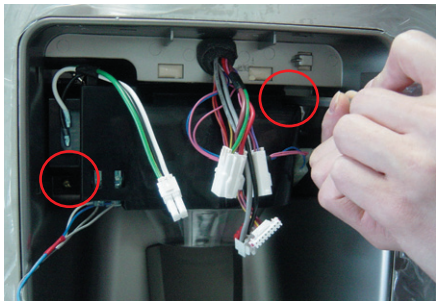
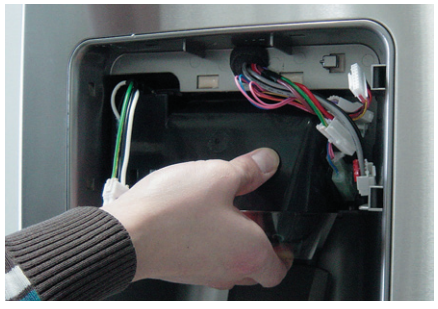
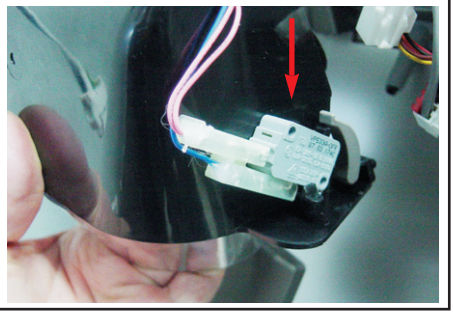
Part Name	How To Do	Descriptive Picture
Refrigerator Light	1. Remove the lamp cover by inserting a tool into the rear of lamp cover hole.	
	2. Remove the screws. And separate Case Lamp.	
	3. Separate the LED housing.	
	4. Remove the LED from the Case.	

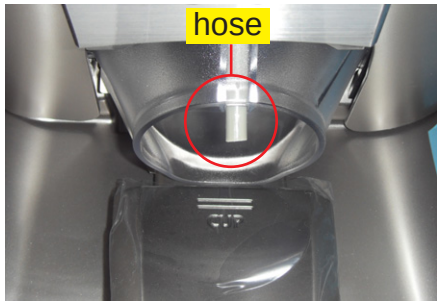
3-5) Cover-Display & Water-Dispenser

Part Name	How To Do	Descriptive Picture
Cover-Display	1. Hold the Ice & Water select tab and pull it forward to take off the Display Panel. Take care not to break it.	
	2. Disengage the housing connect of display cover.	
	3. Remove 4 screws of cover display.	

Part Name	How To Do	Descriptive Picture
Cover-Display	4. Remove 4 screws of cover-display.	

3-6) Water-Dispenser

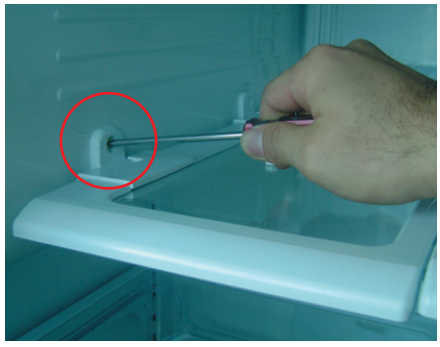
Part Name	How To Do	Descriptive Picture
Water-Dispenser	1. Disengage the 3 Housing Connectors.	
	2. Remove 2 screws of the Case Ice Route Assy.	
	3. Pull the Case Ice Route Assy.	
	4. Push the hook and remove the Micro Switch.	

Part Name	How To Do	Descriptive Picture
Water-Dispenser	1. Assembly shall be in order from the disassembly. Case-Ice and Route shall be assembled inside of hose. Otherwise, assemble cannot be accomplished.	
	2. When assembling Cover-Display, first insert it from leftside and then assemble to rightside. Otherwise, the hook can be broken.	

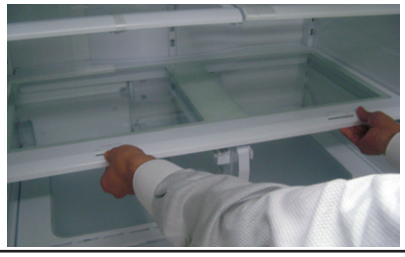
3-7) Glass Shelf

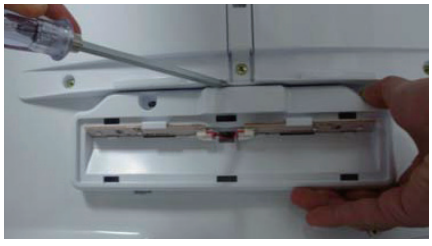
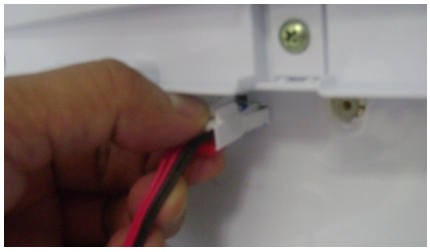
Part Name	How To Do	Descriptive Picture
Glass Shelf	Remove the shelf by lifting the front part of the shelf up and pulling it out.	

3-8) Foldable Glass Shelf

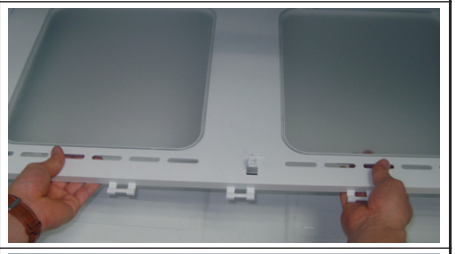
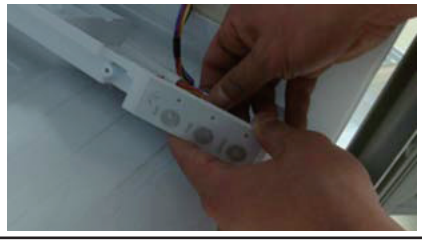
Part Name	How To Do	Descriptive Picture
Foldable Glass Shelf	Remove 2 screws of the Folderble Glass Shelf	

3-9) Vegetable & Fruit Drawers Shelf

Part Name	How To Do	Descriptive Picture
Vegetable & Fruit Drawers Shelf	1. Remove the vegetable & fruit drawer by pulling the roller part and lifting it up.	
	2. Remove the vegetable & fruit drawer shelf by pulling it out. (Refer to the picture)	

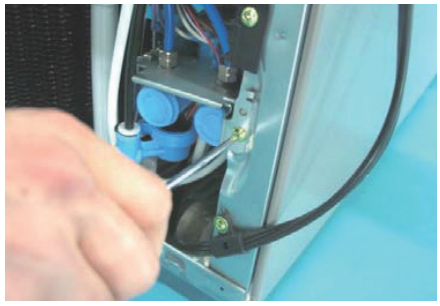
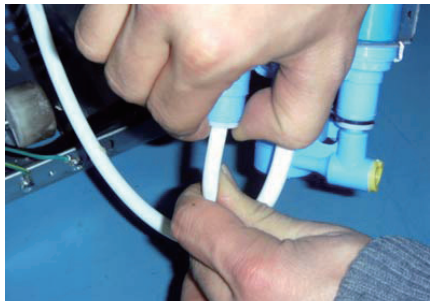
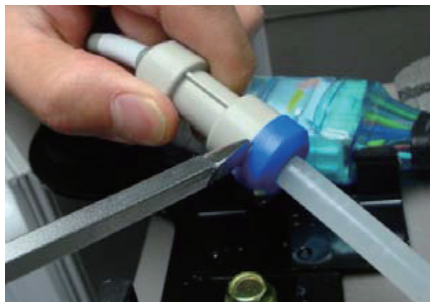
Part Name	How To Do	Descriptive Picture
Vegetable & Fruit LED LAMP	1. Pull out the Cover LED with a flat head screwdriver.	
	2. Pull out the Case LED with a flat head screwdriver.	
	3. Disengage the housing connector.	

3-10) Cool Select Pantry

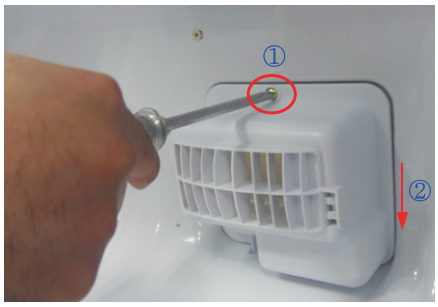
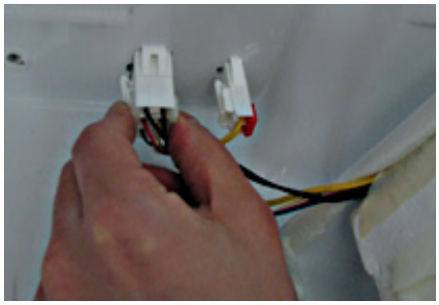
Part Name	How To Do	Descriptive Picture
Cool Select Pantry	1. Remove the cool select pantry by pulling the roller part and lifting it up.	
Cool Select Pantry Cover	1. Remove the cool select pantry cover by lifting up the left part of the cover and pulling it.	
Cool Select Pantry Shelf	1. Remove the cool select pantry shelf by lifting the front part of the shelf while pulling it.	
Cool Select Pantry Rail	1. Remove the cool select pantry rail by unscrewing the 2 screws and pulling the rail.	
	2. Disconnect the housing connector from the internal rail part. (Refer to the picture)	

3-11) Water Tank

Part Name	How To Do	Descriptive Picture
Water Tank	The Water Tank is located in the lower part of the fridge. Before disassembling the Water Tank take out shelves and drawers and pantry located in front of the Water Tank. 1. Remove 2 screws of the Water Tank cover.	
	2. Disengage the housing connector.	
	3. Remove the 1 screws attached to the Water Tank Heater. Remove the Water Tank heater. Remove the Water Tank cover.	

Part Name	How To Do	Descriptive Picture
Water Tank	One Water Tube is located in the machine compartment of the refrigerator. Before disassembling the Water Tube, take out the compressor cover. 5. Remove the water valve fixed by the screw.	
	6. Disconnect the water tube by pushing the tube fitting apart as shown in the picture.	
	7. Remove the cap tube fitting with a flat head screwdriver.	
	The other Water Tube is located in the Top Table of the refrigerator. Before disassembling the Water Tube, take out the Top table. 8. Disconnect the Water Tube by pushing the tube fitting apart as shown in the picture.	
	9. Remove the Water Tank by pulling the Water Tube.	

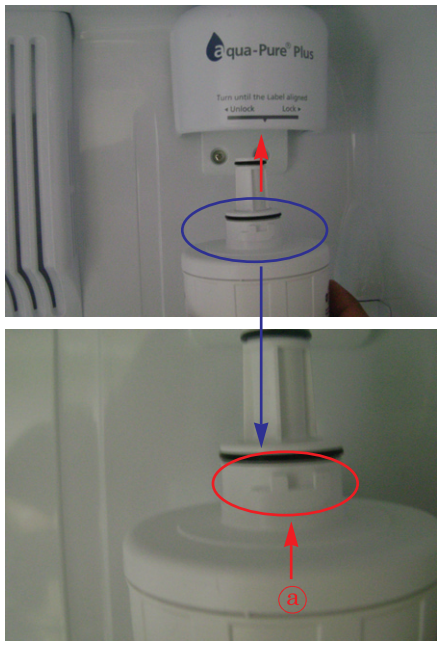
3-12) Motor Damper

Part Name	How To Do	Descriptive Picture
Motor Damper	1. Remove the cool select pantry. Remove the screw of motor damper part and than push the motor damper down.	
	2. Disengage 2 housing connectors from the rear motor damper. (Refer to the picture)	

3-13) Water Filter (Disassembly)

Part Name	How To Do	Descriptive Picture
Water Filter	1. Remove the shelf by lifting the front plane of the shelf up and pulling it out. 2. Remove the water filter by turning it counterclockwise. (Refer to the picture)	

3-14) Water Filter (Reassembly)

Part Name	How To Do	Descriptive Picture
Water Filter	1. Place the part of (ⓐ) arrow (that is indicating in the picture) in the middle of the front filter cover push it up.	
	2. Turn the water filter clockwise until central horizontal line of filter cover and both ends of water filter label are aligned. (Refer to the picture.)	

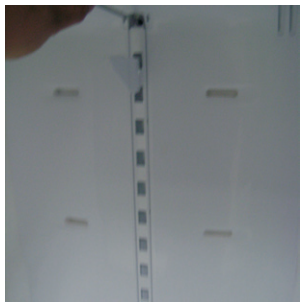
3-15) Gallon Door Bin

Part Name	How To Do	Descriptive Picture
Gallon Door Bin	1. Remove the gallon door bin by lifting it up. (Refer to the picture)	

3-16) Vertical Hinged Section

Part Name	How To Do	Descriptive Picture
Vertical Hinged Section	1. Remove 2 screw caps with a flat-blade(-) screwdriver. (Refer to the picture)	
	2. Unscrew 2 screws.	
	3. Disengage the internal housing connector of the vertical hinge.	
	4. Remove the vertical hinged section by lifting the vertical hinge up. (Refer to the picture)	

3-17) Evaporator Cover In Refrigerator

Part Name	How To Do	Descriptive Picture
Evaporator Cover In Refrigerator	1. Remove the angle cap with a flat-blade screwdriver. (Refer to the picture)	
	2. Unscrew 4 screws.	
	3. Remove the the lower part of angle mid by pulling it out and pushing it down. (Refer to the picture)	
	4. Remove the hook by pulling it from the lower part and pushing the cover down. (Refer to the picture)	
	5. Disconnect the 2 housing connectors. (Refer to the picture)	

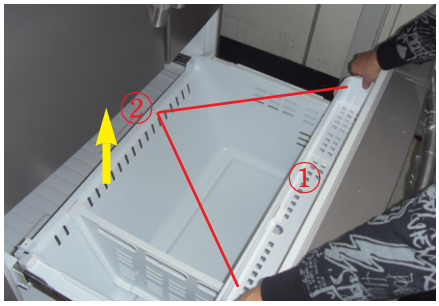
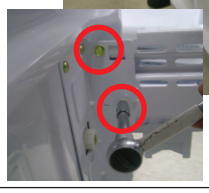
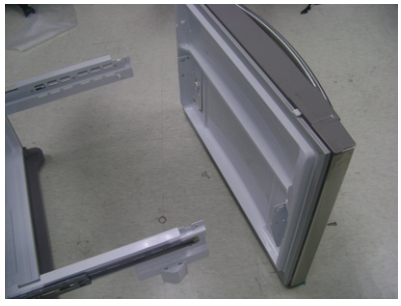
3-18) Evaporator In Refrigerator

Part Name	How To Do	Descriptive Picture
Evaporator In Refrigerator	1. Remove the the housing cover by pushing both lateral sides of the housing cover and pulling it out. (Refer to the picture)	
	2. Disconnect the 3 housing connectors. (Refer to the picture)	
	3. Remove the evaporator by lifting the bottom side of it up and pulling it out. (Refer to the picture)	

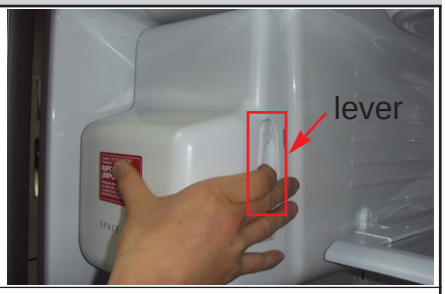
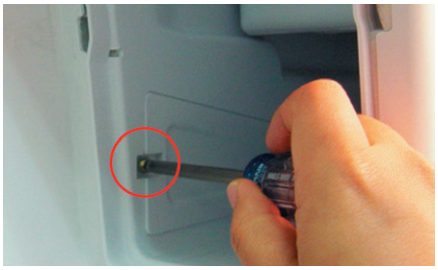
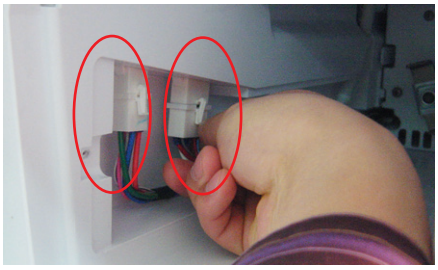
3-19) Super Extended Drawer

Part Name	How To Do	Descriptive Picture
Super Extended Drawer	1. Slide the drawer in as much as possible.	
	2. Lift the drawer up.	
	3. Remove the drawer by lifting the bottom part of drawer bin and pulling it out.	

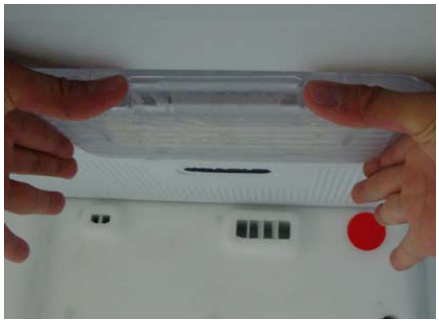
3-20) Freezer Door

Part Name	How To Do	Descriptive Picture
Freezer Door	1. Take out the upper drawer by lifting it up.	
	2. Remove the tilting Pocket(①) by pulling the both brackets(②) upward at the same time.	
	3. Take out the lower basket(③) by lifting the basket up from rail system.	
	4. Unscrew 4 bolts. (2 bolts each on the both sides)	 
	5. Lift up the freezer door from the rails.	

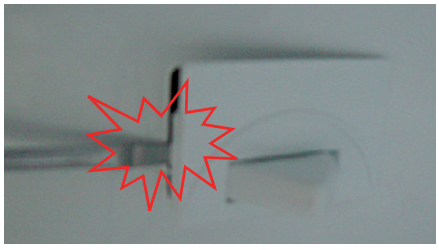
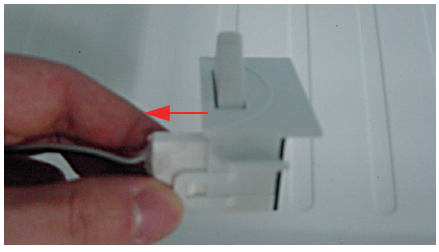
3-21) Ice-Maker

Part Name	How To Do	Descriptive Picture
Ice Maker	1. Pull the lever forward and take out the ice bucket.	
	2. Remove 1 screw of the Cover.	
	3. Disassemble the cover with a flat-blade(-) screwdriver and pull it out.	
	4. Disengage the 2 housing connectors.	
	5. Push the hook and pull the Ice-Maker out.	
	6. To disassemble, pull the tab and pull the Case-Auger and the motor out.	

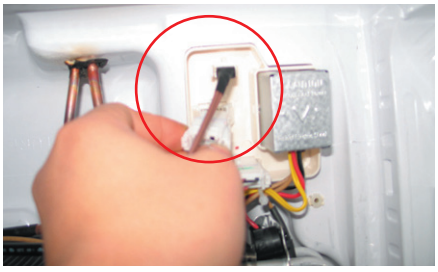
3-22) Freezer Light

Part Name	How To Do	Descriptive Picture
Freezer LED	1. Remove the LED by pulling the LED cover down while pulling the front plane of LED cover.	

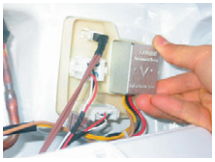
3-23) Door Switch In Freezer

Part Name	How To Do	Descriptive Picture
Door Switch In Freezer	1. Remove the freezer drawer bin by using a flat-blade(-) screwdriver.(Refer to the picture)	
	2. Disconnect the housing connector part.	

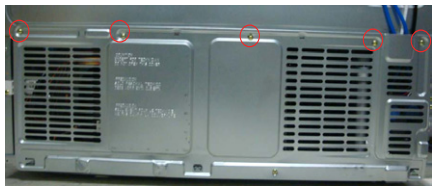
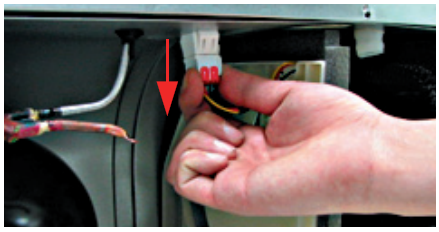
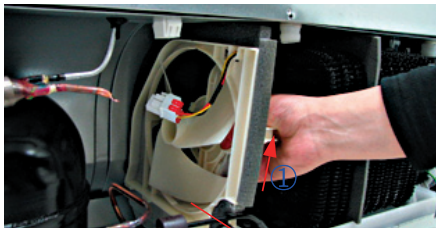
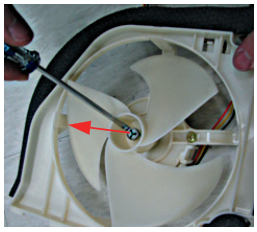
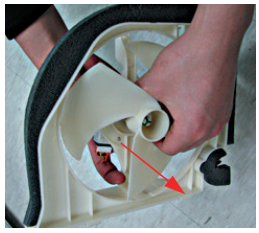
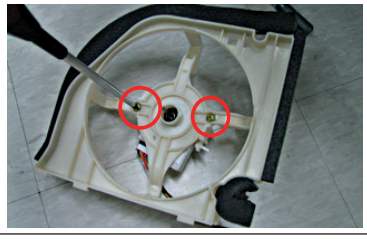
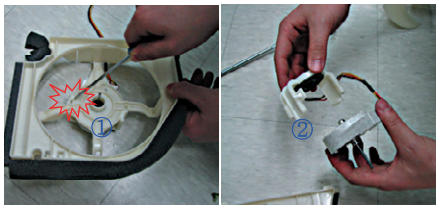
3-24) Evaporator Cover In Freezer

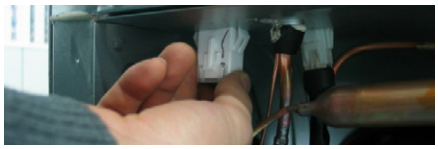
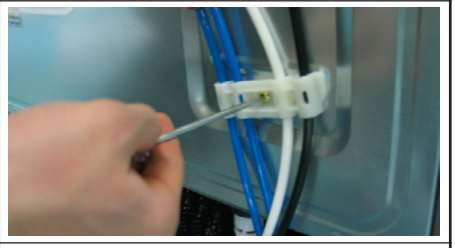
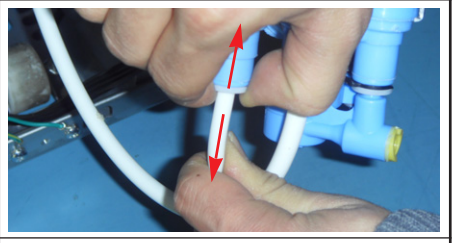
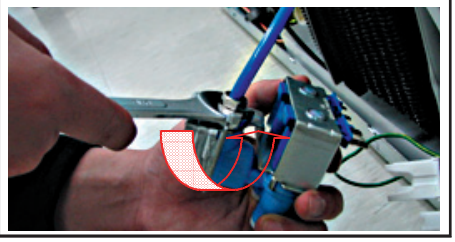
Part Name	How To Do	Descriptive Picture
Evaporator Cover In Freezer	1. Remove the freezer door and freezer drawer by pulling out the drawer and then unscrewing 2 screws.	
	2. Lift up the evaporator cover.	
	3. Disengage the 3 housing connectors and remove the evaporator cover.	

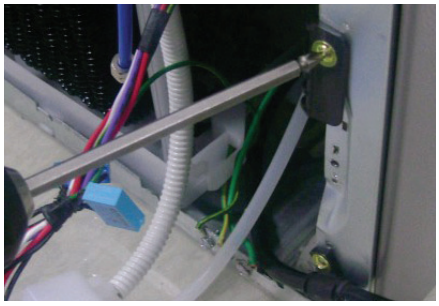
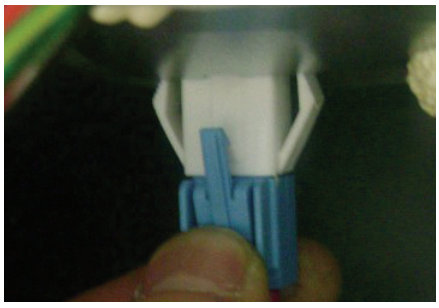
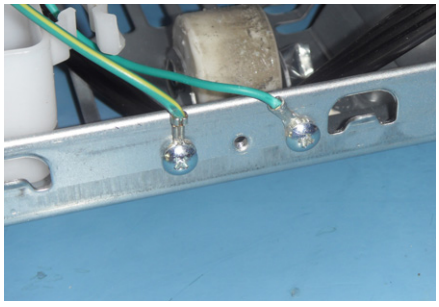
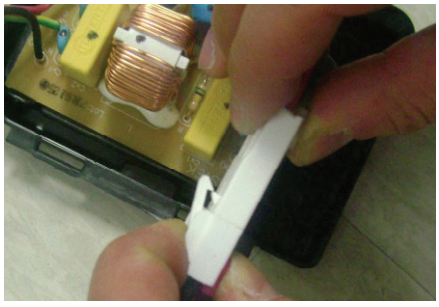
3-25) Evaporator In Freezer

Part Name	How To Do	Descriptive Picture
Evaporator In Freezer	1. Remove the housing cover by pushing both lateral sides of housing cover part and pulling it out. Remove the housing connector part.	
	2. Remove the evaporator by pulling the lower part of the evaporator while lifting it up.	

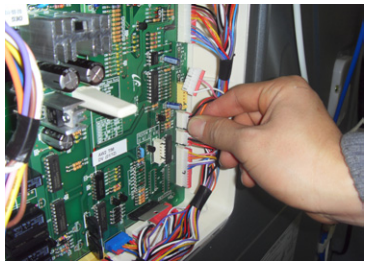
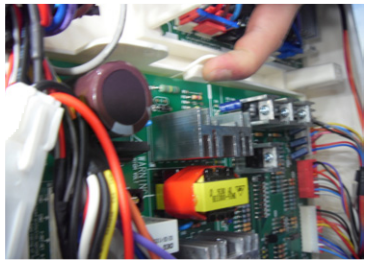
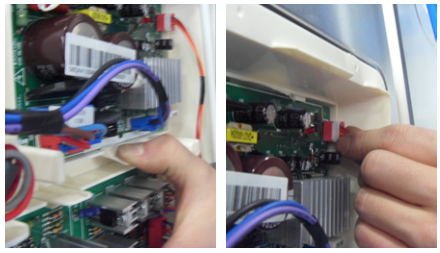
3-26) Machine Compartment

Part Name	How To Do	Descriptive Picture
Motor Fan	1. Unscrew 5 screws of cover compressor.	
	2. Disengage the housing connector. (Refer to the picture)	
	3. Remove the hooker of support circuit motor by lifting the hooker up and pulling it out.	
	4. Remove the screw with a flat-blade screwdriver. (Refer to the picture)	
	5. Remove the motor fan by pulling the fan out while graping the motor part. (Refer to the picture)	
	6. Unscrew 2 screws fixed in the motor.	
	7. Remove the hook of the motor cover with a flat-blade (-) screwdriver and then remove the motor.	

Part Name	How To Do	Descriptive Picture
Relay O/L	1. Disengage the housing connector.	
	2.Remove Cover Relay.	
	3. Remove the relay O/L with a flat-blade screwdriver. (Refer to the picture)	
Water Valve	1. Unscrew the screw which is fixing the Water Valve.	
	2. Disassembling the fixer hose which is fixing the four hoses like a picture.	
	3. Remove 2 water hose parts while pushing the upper part of ①. (Refer to the picture)	
	4. Remove the hose connected by the nut with a wrench(0.31 ″).	

Part Name	How To Do	Descriptive Picture
Power Cord & Noise Filter	1. Unscrew 2 screws.	
	2. Disengage the housing connector.	
	3. Unscrew 2 earth screws.	
	4. Remove the cover by pushing the hook up using a flat-blade(-) screwdriver. (Refer to the picture)	
	5. Disengage the housing connector to separate the power cord and noise filter.	

3-27) Electric Box

Part Name	How To Do	Descriptive Picture
PBA Main	1. Pull the refrigerator forward to have enough space to work at the rear side of the appliance.	
	2. Unscrew 2 screws of the PCB cover.	
	3. Disengage all housing connectors from the main PCB.	
	4. Remove the main PCB by lifting the upper part of the hook up. (Refer to the picture)	
PBA Inverter	1. Remove the cover PCB and then disengage the housing connector connected with main PCB. Remove the SMPS PCB by pushing the lower part of the hook down.	

4. TROUBLESHOOTING

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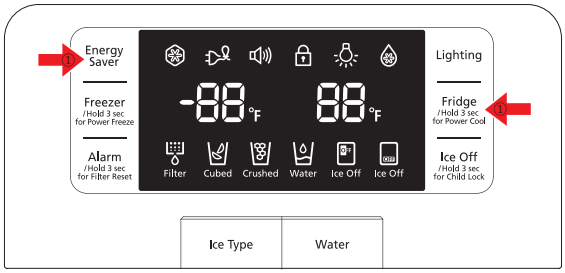
TROUBLESHOOTING

4-1) Function for failure diagnosis

4-1-1. Test mode (manual operation / manual defrost function)

- If Energy Saver Key + Fridge Key on the front of panel are pressed simultaneously for 8 seconds , it will be changed to the test mode and all displays on the front of panel will be off.
- If any key on the front of panel is pressed within 15 seconds after the test mode, it will be operated as below sequence :
  manual operation(Freezer compartment 1) → manual operation(Freezer compartment 2) → manual operation(Freezer compartment 3) → manual defrost of fresh food and freezer compartments(Fd) → Cancel(Display all off).
- If any key on the front of panel is not pressed within 15 seconds after the test mode, the test mode will be canceled and it will be returned to previous mode.
- If the test mode is canceled, Recommend the power off and reactivate the refrigerator.

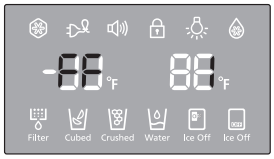
1) Manual operation function



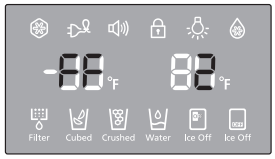
① If Energy Saver Key + Fridge Key are pressed simultaneously for 8 seconds, (displays are all off)
It will be changed to the test mode (manual operation) by pressing any key

1-1) If any key is pressed once in test mode, blinks "FF-1" on the display and it indicates the refrigerator has entered the manual operation. At this moment, buzzer beeps as an alarm.
1-2) If any key is pressed once at the manual operation1 status, FF-2 will be displayed.
And if any key is pressed one more time, FF-3 will be displayed. FF-2 and FF-3 means manual operation2 and 3 separately. These 3 functions operate with different RPM of COMP.
1-3) If manual operation is selected, compressor will run at once without 7 minutes delay in any mode. If the refrigerator is on the defrost cycle at the moment, defrost will be finished and manual operation will begin.
(Be careful if manual operation get started at the moment of compressor off, over load could be occurred.)

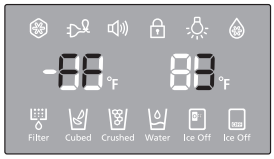
Compulsion working 1 : 3600RPM



Compulsion working 2 : 2450RPM

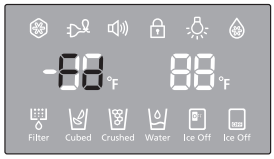


Compulsion working 3: 2200RPM



1-4) If manual operation works, compressor & f-fan operate continuously for 24 hours and fresh food compartment will be controlled by the setting temperature.
1-5) When the manual operation runs, setting temperature will be selected automatically as below: freezer compartment -8℉.(-22℃), fresh food compartment 32℉(1℃).
1-6) During manual operation, Power Freeze & Power Cool function will not be worked.
If a function is selected, the power function icon of the selected function will be off automatically after 10 seconds.
1-7) Manual operation can be canceled by turning on the appliance after power off(reset) or choosing the step 3) test cancel mode.
1-8) Alarm(0.25 sec ON/ 0.75 sec OFF) will beep continuously until manual operation is completed and there is no function to make the sound stop.

2) Simultaneous manual defrost(fresh food and freezer compartments) function



2-1) If any key is pressed one more time during manual operation(fresh food compartment), "Fd" shows in the display and then manual operation will be canceled at once and fresh food and freezer compartment will be defrosted.

2-2) At this moment, alarm beeps for 3 seconds (0.1 sec ON/ 1 sec OFF) during manual defrost function of fresh food and freezer compartment.

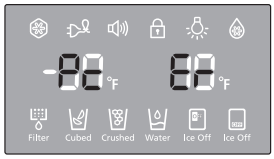
3) Test cancel mode

3-1) During the simultaneous defrosting of fresh food and freezer compartments simultaneously, if the display panel change to the test mode and test button is pressed one more time, defrosting of fresh food and freezer compartments will be canceled at the same time and will return to the normal operation. Or, all test functions will be canceled by turning main power OFF and ON.

4-1-2. Display function of Communication error

1) Display function when Panel ↔ MAIN MICOM communication has error

1-1) If there is no answer for 10 seconds after the panel micom received the requirement of communication, "Pc - Er" display on the panel PCB will be ON/OFF alternately until the communication error is canceled. (0.5 sec ALL ON, 0.5 sec ALL OFF alternately)



1-2) “Pc - E” display on the Pantry Room Display will be ON/OFF alternately until the communication error is canceled. (0.5 sec ALL ON, 1.5 sec ALL OFF alternately)

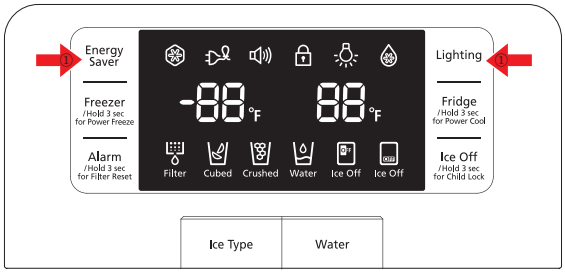
2) Display function when Panel ↔ MAIN MICOM OPTION has error

2-1) ”OP - Er” code is repeatedly ON/OFF until Option error settles down.

4-1-3. Self-diagnostic function

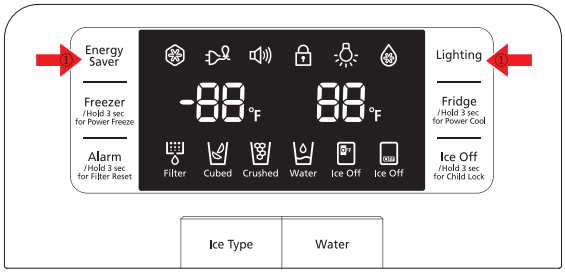
1) Self-diagnostic function in the Initial power ON

1-1) Micom operates self-diagnostic function to check the temperature sensor condition within 1 second when the refrigerator turned On initially.
1-2) If bad sensor is detected by the self-diagnostic function, the applicable display LED will blink for 0.5 sec.
At this moment, there is no beep sound.(Refer to self-diagnostic CHECK LIST)
1-3) Self-diagnostic button is recognized only when the error is displayed by the bad sensor. Display does not operate normally but temperature control will be controlled by the emergency operation.
1-4) When the error is detected by self-diagnosis, the error can be canceled automatically if all troubled sensors are corrected or Self-diagnostic function key (Energy Saver Key + Lighting Key) are pressed simultaneously for 8 seconds.
(Return to normal display mode)



① If Energy Saver Key + Lighting Key are pressed simultaneously for 8 seconds, the error mode by self-diagnosis will be canceled.

2) Self-diagnostic function during normal operation



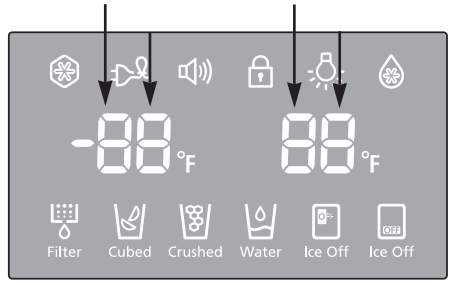
① If Energy Saver Key + Lighting Key are pressed simultaneously for 8 seconds, the error mode by self-diagnosis will be canceled.

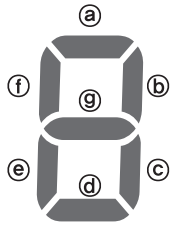
2-1) If Energy Saver Key + Lighting Key are pressed simultaneously for 6 seconds during normal operation, the temperature setting display will operate for 2 seconds (ON/OFF 0.5sec each).
If Energy Saver Key + Lighting Key are pressed simultaneously for 8 seconds (including above 2 seconds), self-diagnostic function will be selected.
2-2) At this moment, self-diagnostic function will be returned with buzzer sound 'ding-dong'.
If there is an error, display of error will be operated for 30 seconds and then return to normal condition whether problem is corrected or not.
(Refer to self-diagnosis CHECK LIST)
2-3) Input by button is not accepted during self-diagnostic function.

TROUBLESHOOTING

∗ Self-diagnosis CHECK LIST

NO	Trouble item	Display LED	Trouble contents
1	Ice Maker Sensor Error(R)	R-1-ⓐ	Senser system in ICE MAKER(R) errors
2	R-Sensor Error	R-1-ⓑ	Sensor system in FF compartment errors
3	R-DEF-Sensor Error	R-1-ⓒ	Defrost Sensor system in FF compartment errors
4	R-FAN Error	R-1-ⓓ	Fan motor system in FF compartment errors
5	Ice Maker operation Error(R)	R-1-ⓔ	ICE MAKER(R) operation system error
6	R-DEF, Heater Error	R-1-ⓖ	Defrost system in FF compartment errors
7	Ambient-Sensor Error	F-1-ⓐ	Snesor external system errors
8	F-Sensor Error	F-1-ⓑ	Sensor system in FZ compartment error
9	F-DEF-Sensor Error	F-1-ⓒ	Defrost Sensor system in FZ compartment errors
10	F-FAN Error	F-1-ⓓ	Fan motor system in FZ compartment errors
11	C-FAN Error	F-1-ⓔ	Fan motor system in machinery room errors
12	Ice Room-Sensor Error	F-1-ⓕ	Sensor system in ICE ROOM errors
13	F-DEF.-Heater Error	F-1-ⓖ	Defrost system in FZ compartment errors
14	Ice Room FAN Error	F-10-ⓑ	Fan motor system in ICE ROOM errors
15	Pantry-Damper-Heater Error	R-10-ⓐ	Damper Heater open/wire connection errors
16	Pantry-Sensor Error	R-10-ⓑ	Sensor system in Pantry Room errors
17	Panel↔Main Micom Error	F-10-ⓖ	Communication between Panel MAIN MICOM error
18	Water Tank-Heater Error	R-10-ⓖ	Water Tank Heater open/wire connection errors
19	Ice Maker Sensor Error(F)	R-10-ⓓ	Senser system in ICE MAKER(R) errors
20	Ice Maker operation Error(F)	R-10-ⓔ	ICE MAKER(F) operation system error
21	Ice Pipe Heater Error	R-10-ⓕ	Ice Pipe Heater open/wire connection errors



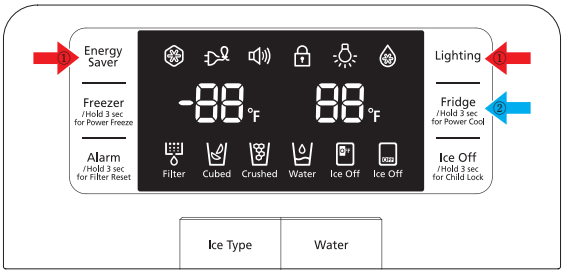


TROUBLESHOOTING

∗ Self-diagnostics check list

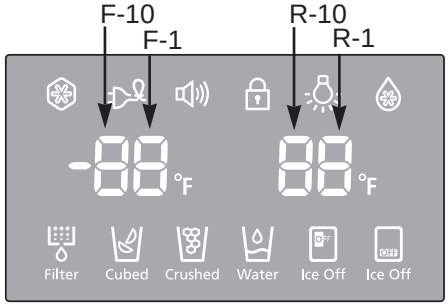
LED	Item	Trouble contents	Diagnostic method
R-1-ⓐ	Ice Maker(R) Sensor Error	Display error : separation of sensor housing part, contact error, disconnection, short circuit Display error of detecting temperature of sensor: more than 149˚F (+65°C) or less than -58˚F(-50°C)	The voltage of MAIN PCB CN30 #7↔CN76 #1:shall be between 4.5V~1.0V
R-10-ⓓ	Ice Maker(F) Sensor Error		The voltage of MAIN PCB CN90 #8 ↔#4: shall be between 4.5V~1.0V
R-1-ⓑ	R-Sensor Error		The voltage of MAIN PCB CN30#6↔ CN76#1:shall be between 4.5V~1.0V
R-1-ⓒ	R-DEF-Sensor Error		The voltage of MAIN PCB CN30#8↔ CN76#1:shall be between 4.5V~1.0V
R-1-ⓓ	R-FAN Error	Display error during operation of applicable fan motor : Feed Back signal line contact error, separation of motor wire, motor error	Voltage of MAIN PCB CN76-4 Orange ↔ 1 Gray shall be between 7V~12V
R-1-ⓔ	Ice Maker(R) operation Error	Display error : ice making kit is harvested more than 3 times and level error ** Apply to the applicable Ice Maker model.	After replacing ice maker, check the operation by turning the appliance ON again.
R-10-ⓔ	Ice Maker(F) operation Error	ice making kit is harvested more than 3 times and level error ** Apply to the applicable Ice Maker model.	After replacing ice maker, check the operation by turning the appliance ON again.
R-1-ⓖ	R-DEF. Error	Display error : separation of fresh food compartment defrost heater housing part, contact error, disconnection, short circuit or temperature fuse error. Display error : the defrosting does not finish though fresh food compartment defrost is heating continuously for more than 80 minutes.	After separating MAIN PCB CN70,CN71 from PCB, the resistance value between CN70 White ↔ CN71 Orange shall be 110(441) ohm ± 7%. (Resistant value is varied by the input power) 0 Ohm : heater short, ∞ Ohm : wire / bimetal Open.
F-1-ⓐ	Ambient-Sensor Error	Display error : sensor housing separation, contact error, disconnection, short circuit Display error by detecting temperature of sensor: more than 149˚F (+65°C) or less than -58˚F(-50°C)	The voltage of MAIN PCB CN31#1↔#4 : shall be between 4.5V~1.0V.
F-1-ⓑ	F-Sensor Error		The voltage of MAIN PCB CN30#3↔ CN76#1:shall be between 4.5V~1.0V
F-1-ⓒ	F-DEF-Sensor Error		The voltage of MAIN PCB CN30#4↔CN76#1:shall be between 4.5V~1.0V
F-1-ⓓ	F-FAN Error	Display error during operation of applicable fan motor : Feed Back signal line contact error, motor wire separation, motor error	Voltage of MAIN PCB CN76-3 Yellow ↔ 1 Gray shall be between 7V~12V.
F-1-ⓔ	C-FAN Error	Display error during operation of applicable fan motor : Feed Back signal line contact error, motor wire separation, motor error	Voltage of MAIN PCB CN76-5 Sky-blue ↔ 1 Gray shall be between 7V~12V.
F-1-ⓕ	Ice Room Sensor Error	Display error : sensor housing separation,contact error, disconnection, short circuit. Display error by detecting temperature of sensor: more than 149˚F (+65°C) or less than -58˚F (-50°C)	The voltage of MAIN PCB CN31#3↔CN76#1:shall be between 4.5V~1.0V
F-1-ⓖ	F-DEF. Error	Display error : separation of freezer compartment defrost heater housing part , contact error, disconnection, short circuit or temperature fuse error. Display error : the defrosting does not finish though fresh food compartment defrost is heating continuously for more than 70 minutes.	After separating MAIN PCB CN70,CN71 from PCB, resistant value between CN70 brown ↔ CN71 Orange shall be 55(220) ohm ± 7%. (Resistant value is varied by input power) 0 Ohm : heater short, ∞ Ohm : wire / bimetal Open.
F-10-ⓑ	Ice Room-FAN Error	Display error during operation of applicable fan motor : Feed Back signal line contact error, motor wire separation, motor error	Voltage of MAIN PCB CN76-2 Black ↔ CN76-1 Gray : shall be between 6V~12V.
R-10-ⓐ	Pantry-Damper-Heater Error	Display error when open error is detected by damper heater : separation of Damper Heater housing part, contact error, disconnection, short circuit	After separating MAIN PCB CN91from PCB, the resistant value between Black ↔ brown wire shall be 145 ohm ± 7%. 0 Ohm : heater short, ∞ Ohm : wire / bimetal Open.
R-10-ⓑ	Pantry-Sensor Error	Display error : separation of sensor housing, contact error, disconnection, short circuit. Display error by detecting temperature of sensor: more than 149˚F (+65°C) or less than -58˚F(-50°C)	The voltage of MAIN PCB CN30#9 ↔ CN76#1 : shall be between 4.5V~1.0V.
R-10-ⓖ	Water Tank-Heater Error	Display error when open error is detected by Water Tank Heater : separation of Water Tank Heater housing part,contact error, disconnection, short circuit	After separating MAIN PCB CN79 from PCB, the resistant value between pink ↔ white wire shall be 72 ohm ± 7%. Check : 0 Ohm → heater short, ∞Ohm → wire / bimetal Open.
F-10-ⓖ	Panel↔Main communication Error	Display "Pc - Er" in the panel with alarm : MICOM MAIN PANEL communication error oP-Er is displayed when the Option is not equivalent with the right value.	Actually, If there is not a problem, it is desirable to replace Main and Panel PCB With the oscilloscope after a cable problem confirming.
R-10-ⓕ	Ice Pipe-Heater Error	Display error when open error is detected by Ice Pipe Heater : separation of Water Tank Heater housing part,contact error, disconnection, short circuit	After separating MAIN PCB CN79 from PCB, the resistant value between blue ↔ white wire shall be 72 ohm ± 7%. Check : 0 Ohm → heater short, ∞Ohm → wire / bimetal Open.

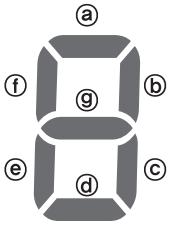
4-1-4. Display function of Load condition



① If Energy Saver Key + Lighting key are pressed simultaneously for 6 seconds, ALL ON/OFF will blink with 0.5interval for 2 seconds.
② If take the finger off from above keys and press Fridge, load condition mode will be started.

1) If Power Energy Saver Key + Lighting key are pressed simultaneously for 6 seconds during normal operation, the temperature setting display of fresh food and freezer compartments will blink ALL ON/OFF with 0.5 for 2 seconds.
2) At this moment, If Fridge Key after Energy Saver Key + Lighting Key is pressed, load condition display mode will be returned with alarm. At LED all on state, only load condition display will blink ON/OFF with 0.5 seconds interval.
3) Load condition display mode shows the load that micom signal is outputting.
However, It means that micom signal is outputting, it does not mean whether load is operating or not. That is to say that though load operation is displayed, load could not be operated by actual load error or PCB relay error etc. (This function would be applied at A/S.)
4) Load condition display function will maintain for 30 seconds and then normal condition will be returned automatically.
5) Load condition display is as below.

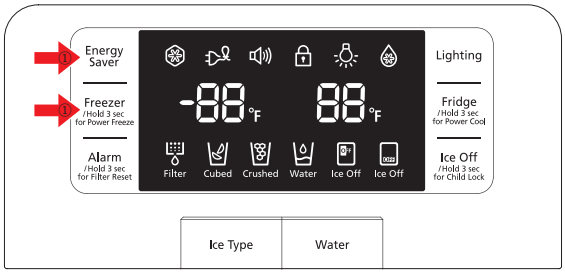




∗ Load mode Check list

Display LED	Display contents	Operation contents
R-1-ⓐ	R-FAN High	When FF compartment FAN operates with high speed, applicable LED ON
R-1-ⓑ	R-FAN Low	When FF compartment FAN operates with low speed, applicable LED ON
R-1-ⓒ	R-DEF Heater	When FF compartment defrost heater operates, LED ON
R-1-ⓓ	Start Mode	When refrigerator is plugged initially, LED ON
R-1-ⓔ	Overload condition	When ambient temperature is more than 93˚F (34°C), LED ON
R-1-ⓕ	Low temperature condition	When ambient temperature is less than 72˚F (22°C), LED ON
F-1-ⓔ,ⓕ ALL LED Off	Normal Condition	When ambient temperature is between 73˚F (23°C) and 91˚F (33°C)
R1-ⓖ	Exhibition Mode	LED ON at the display mode.
F-1-ⓐ	COMP.	When COMP operates, applicable LED ON.
F-1-ⓑ	F-FAN High	When FZ compartment FAN operates with high speed, applicable LED ON.
F-1-ⓒ	F-FAN Low	When FZ compartment FAN operates with low speed, applicable LED ON.
F-1-ⓓ	F-DEF Heater	When FZ compartment defrost heater operates, LED ON
R-10-ⓔ	C-FAN High	When compressor FAN operates with high speed, applicable LED ON.
R-10-ⓕ	C-FAN Low	When compressor FAN operates with low speed, applicable LED ON.
F-1-ⓖ	Dispenser Heater	When Dispenser Heater operates, applicable LED ON.
F-10-ⓐ	Water Tank Heater	When Water Tank Heater operates, applicable LED ON.
F-10-ⓓ	Ice Room-FAN High	When Ice Room-FAN operates with high speed, applicable LED ON.
F-10-ⓔ	Ice Room-FAN Low	When Ice Room-FAN operates with low speed, applicable LED ON.
R-10-ⓖ	French Heater	When French heater operates, applicable LED ON
R-10-ⓐ	Pantry Room Damper Open	When damper open, applicable LED ON
F-10-ⓑ	F-Valve Open	When the F-valve open, LED ON
R-10-ⓑ	R-Valve Open	When the R-valve open, LED ON
R-10-ⓕ	Ice-Pipe Heater	When Ice-Pipe Heater operates, applicable LED ON

4-1-5. Exhibition mode setting function



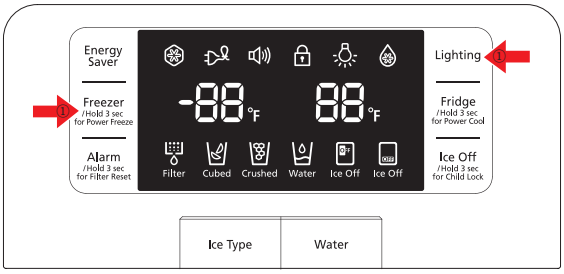
① If Energy Saver Key + Freezer Key are pressed for 3 seconds, Exhibition mode will be started.

1) If Energy Saver Key + Freezer are pressed simultaneously for 3 seconds during normal operation, Exhibition mode will be started with buzzer sound(ding-dong).
2) If above Energy Saver Key + Freezer Key are pressed one more time, Exhibitoin mode will be canceled.
3) If Exhibition mode is selected, blinks "OF-OF" on the temperature setting display of . The panel and it indicates the refrigerator has entered the Cooling Off mode.
4) During Exhibition mode, if fresh food and freezer compartments sensors are higher than 149˚F (65˚C). Exhibition will be canceled automatically and freezing operation will be returned. (There is no buzzer sound when the Exhibition mode is canceled by the temperature.)
5) Operation contents of Exhibition Mode
   - Display, Fan motor and etc operate normally, not to operate compressor only.
   - Defrost is not operated. (including french heater)
   - Display function of the initial real temperature is finished.
   - Under the condition of Exhibition mode, Exhibition mode will be operated when Power On after Power OFF.

4-1-6. Option setting function

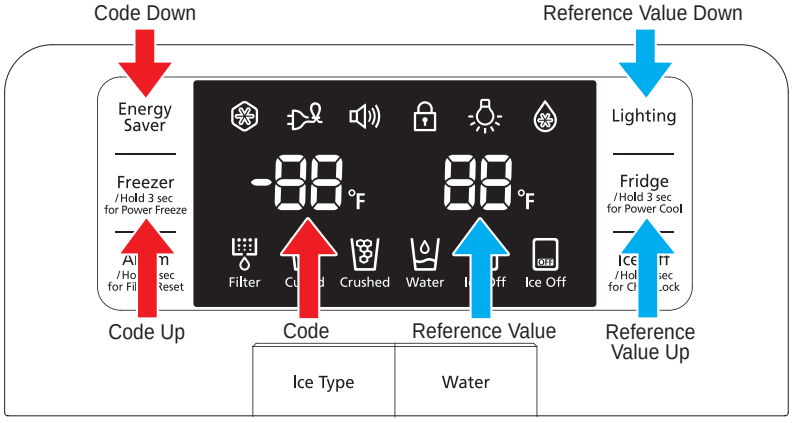
- If Freezer Key+ lighting Key are pressed simultaneously for 12 seconds during normal operation, fresh food and freezer compartments temperature display will be changed to option setting mode.

KEY operation method for changing to option mode



① If Freezer Key+ lighting Key are pressed simultaneously for 12 seconds, option setting mode will be started.

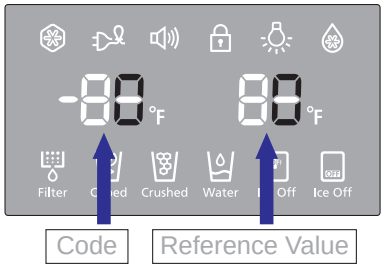
KEY control method after converting to option mode



∗ Key control in option mode

Energy Saver Key	Code Down key
Freezer Key	Code Up key
Lighting key	Reference Value down key
Fridge key	Reference Value Up key

- If the display changes to option setting mode, all displays will be off except freezer and fridge compartments temperature display as below.
  (Fresh food and freezer compartments case will be explained only because all options are operated with the same method according to the option table.)



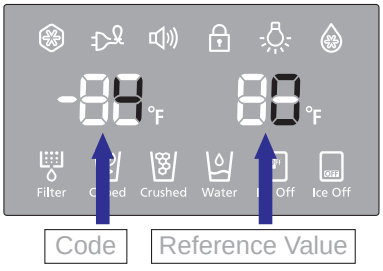
1) For example, if you want to change freezer compartment standard temperature to -4˚F(-2°C) by operating option, do as below. This function is for changing the standard temperature.
In -2˚F(-19°C) of current temperature of freezer compartment, if you make the temperature lower to -4˚F (-2°C) by the option, the standard temperature would be controlled -6˚F(-21°C)
Therefore, if you change the setting of temperature option to -2˚F(-19°C) on the panel, the appliance will be operated with -6˚F(-21°C). It means that standard temperature is controlled -4˚F(-2°C) less than setting temperature in the display.

NOTE

Basically, all the data in option has cleared from the factory.
Therefore, almost all setting value are "0".
But, some setting values could be changed for the purpose of improving performmance.
You need to check the product manual and/or specification.

2) After changing to the option mode, fresh food compartment "0" , freezer compartment "0" will be displayed. (Basically fresh food compartment "0", freezer "0" would be set at shipping process, but setting value could be changed for the purpose of improving product at mass producing process.)
- If fresh food compartment "0" shows only, temperature reference value of freezer compartment will be set and current freezer compartment temperature code will be displayed on the freezer temperature display.

3) If freezer compartment "4" is set as below freezer compartment code after fresh food compartment "0 is set, standard temperature of freezer compartment will be lower than -4˚F(-2.0°C).
(Refer to the picture "changing the freezer compartment temperature")



: If you wait for 20 seconds after completing the setting, MICOM will save the setting value to the EEPROM and normal display will be returned and the option setting mode will be canceled.

4) Option changing method as above is the same as all RFG23** model.
5) By the same method as above, it is possible to control the fresh food compartment temperature, water supply, ice-maker harvest temperature/time, defrost return time, hysteresis by temperature, notch gap by temperature etc.
6) Option function is set in the EEPROM at shipping process in the factory.
You would better not to change the option of your own.
Completing the setting is that option function return to normal display after 20 seconds.
Do not turn off the appliance before returning to the normal display mode.

NOTE

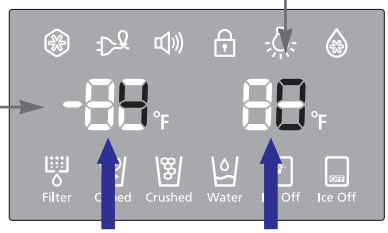
Option setting function exists in the other items.
We will skip the explanation of the other functions by the option because it is associated with refrigerator control function and is not needed at SERVICE.
(Please do not set the other options except above SERVICE Manual.)

4-1-7. Option TABLE

1) Temperature changing table of freezer compartment

Set item	Freezer Temp Shift
MODEL	RFG23*****
Reference Value	Fridge Room 7-SEG
	0

Setting value FZ compartment Code	Temp. compensation
0	0°F(0.0℃)
1	-1°F(-0.5℃)
2	-2°F(-1.0℃)
3	-3°F(-1.5℃)
4	-4°F(-2.0℃)
5	-5°F(-2.5℃)
6	-6°F(-3.0℃)
7	-7°F(-3.5℃)
8	+1°F(+0.5℃)
9	+2°F(+1.0℃)
10	+3°F(+1.5℃)
11	+4°F(+2.0℃)
12	+5°F(+2.5℃)
13	+6°F(+3.0℃)
14	+7°F(+3.5℃)
15	+8°F(+4.0℃)



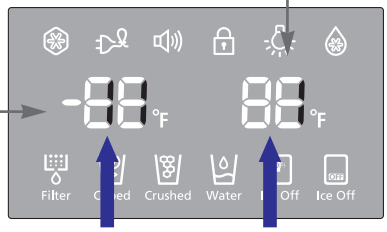
ex) If you want to change the freezer standard temperature to -4°F(-2°C)

2) Temperature changing table of fresh food compartment

Set item	Freezer Temp Shift
MODEL	RFG23*****
Reference Value	Fridge Room 7-SEG
	1

Setting value FZ compartment Code	Temp. compensation
0	0°F(0.0℃)
1	-1°F(-0.5℃)
2	-2°F(-1.0℃)
3	-3°F(-1.5℃)
4	-4°F(-2.0℃)
5	-5°F(-2.5℃)
6	-6°F(-3.0℃)
7	-7°F(-3.5℃)
8	+1°F(+0.5℃)
9	+2°F(+1.0℃)
10	+3°F(+1.5℃)
11	+4°F(+2.0℃)
12	+5°F(+2.5℃)
13	+6°F(+3.0℃)
14	+7°F(+3.5℃)
15	+8°F(+4.0℃)

ex) If you want to change the freezer compartment standard temperature to 4°F(2°C)

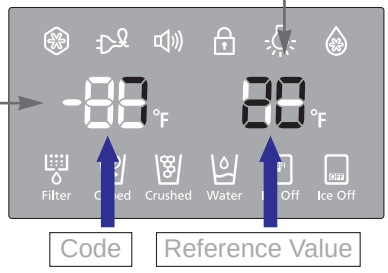


3) Temperature changing table of ICE ROOM compartment .

Set item	ICE ROOM Temp shift
MODEL	RFG23*****
Reference Value	Fridge Room 7-SEG
	20

Setting value FZ compartment Code	Temp. compensation
0	8.6°F(-13℃)
1	6.8°F(-14℃)
2	5°F(-15℃)
3	3.2°F(-16℃)
4	1.4°F(-17℃)
5	-0.4°F(-18℃)
6	-2.2°F(-19℃)
7	10.4°F(-12℃)

ex) If you want to change the freezer compartment standard temperature to 10.4°F(-12℃).



Code | Reference Value

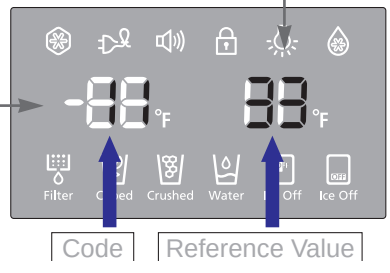
4) Temperature changing table of Pantry Room compartment

- Could change the temperature of Pantry Room in fresh food compartment.

Set item	PANTRY ROOM Temp shift
MODEL	RFG23*****
Reference Value	Fridge Room 7-SEG
	33

Setting value FZ compartment Code	Temp. compensation
0	0°F(0.0℃)
1	-1°F(-0.5℃)
2	-2°F(-1.0℃)
3	-3°F(-1.5℃)
4	-4°F(-2.0℃)
5	-5°F(-2.5℃)
6	-6°F(-3.0℃)
7	-7°F(-3.5℃)
8	+1°F(+0.5℃)
9	+2°F(+1.0℃)
10	+3°F(+1.5℃)
11	+4°F(+2.0℃)
12	+5°F(+2.5℃)
13	+6°F(+3.0℃)
14	+7°F(+3.5℃)
15	+8°F(+4.0℃)

ex) If you want to change the freezer compartment standard temperature to 4°F(2°C).



Code | Reference Value

4-2) Diagnostic method according to the trouble symptom(Flow Chart)

DATA1.Temperature table
Resistance value and MICOM port voltage of sensor according to the temperature.
SENSOR CHIP : PX41C, 502AT// 103**(ICE MAKER SENSOR(MOLD))//FULL UP ,20K ohm used.
(The survey of resistance is nearly twice than below data.)

˚C	˚F	Voltage	Resistance	˚C	˚F	Voltage	Resistance	˚C	˚F	Voltage	Resistance
-50	-58	4.694	153319	-5	23	3.107	16419	40	104	1.153	2997
-49	-56.2	4.677	144794	-4	24.8	3.057	15731	41	105.8	1.124	2899
-48	-54.4	4.659	136798	-3	26.6	3.006	15076	42	107.6	1.095	2805
-47	-52.6	4.641	129294	-2	28.4	2.955	14452	43	109.4	1.068	2714
-46	-50.8	4.622	122248	-1	30.2	2.904	13857	44	111.2	1.040	2627
-45	-49	4.602	115631	0	32	2.853	13290	45	113	1.014	2543
-44	-47.2	4.581	109413	1	33.8	2.802	12749	46	114.8	0.988	2462
-43	-45.4	4.560	103569	2	35.6	2.751	12233	47	116.6	0.963	2384
-42	-43.6	4.537	98073	3	37.4	2.700	11741	48	118.4	0.938	2309
-41	-41.8	4.514	92903	4	39.2	2.649	11271	49	120.2	0.914	2237
-40	-40	4.490	88037	5	41	2.599	10823	50	122	0.891	2167
-39	-38.2	4.465	83456	6	42.8	2.548	10395	51	123.8	0.868	2100
-38	-36.4	4.439	79142	7	44.6	2.498	9986	52	125.6	0.846	2036
-37	-34.6	4.412	75077	8	46.4	2.449	9596	53	127.4	0.824	1973
-36	-32.8	4.385	71246	9	48.2	2.399	9223	54	129.2	0.803	1913
-35	-31	4.356	67634	10	50	2.350	8867	55	131	0.783	1855
-34	-29.2	4.326	64227	11	51.8	2.301	8526	56	132.8	0.762	1799
-33	-27.4	4.296	61012	12	53.6	2.253	8200	57	134.6	0.743	1745
-32	-25.6	4.264	57977	13	55.4	2.205	7888	58	136.4	0.724	1693
-31	-23.8	4.232	55112	14	57.2	2.158	7590	59	138.2	0.706	1642
-30	-22	4.199	52406	15	59	2.111	7305	60	140	0.688	1594
-29	-20.2	4.165	49848	16	60.8	2.064	7032	61	141.8	0.670	1547
-28	-18.4	4.129	47431	17	62.6	2.019	6771	62	143.6	0.653	1502
-27	-16.6	4.093	45146	18	64.4	1.974	6521	63	145.4	0.636	1458
-26	-14.8	4.056	42984	19	66.2	1.929	6281	64	147.2	0.620	1416
-25	-13	4.018	40938	20	68	1.885	6052	65	149	0.604	1375
-24	-11.2	3.980	39002	21	69.8	1.842	5832	66	150.8	0.589	1335
-23	-9.4	3.940	37169	22	71.6	1.799	5621	67	152.6	0.574	1297
-22	-7.6	3.899	35433	23	73.4	1.757	5419	68	154.4	0.560	1260
-21	-5.8	3.858	33788	24	75.2	1.716	5225	69	156.2	0.546	1225
-20	-4	3.816	32230	25	77	1.675	5039	70	158	0.532	1190
-19	-2.2	3.773	30752	26	78.8	1.636	4861	71	159.8	0.519	1157
-18	-0.4	3.729	29350	27	80.6	1.596	4690	72	161.6	0.506	1125
-17	1.4	3.685	28021	28	82.4	1.558	4526	73	163.4	0.493	1093
-16	3.2	3.640	26760	29	84.2	1.520	4369	74	165.2	0.481	1063
-15	5	3.594	25562	30	86	1.483	4218	75	167	0.469	1034
-14	6.8	3.548	24425	31	87.8	1.447	4072	76	168.8	0.457	1006
-13	8.6	3.501	23345	32	89.6	1.412	3933	77	170.6	0.446	978
-12	10.4	3.453	22320	33	91.4	1.377	3799	78	172.4	0.435	952
-11	12.2	3.405	21345	34	93.2	1.343	3670	79	174.2	0.424	926
-10	14	3.356	20418	35	95	1.309	3547	80	176	0.414	902
-9	15.8	3.307	19537	36	96.8	1.277	3428	81	177.8	0.404	877
-8	17.6	3.258	18698	37	98.6	1.253	3344	82	179.6	0.394	854
-7	19.4	3.208	17901	38	100.4	1.213	3204	83	181.4	0.384	832
-6	21.2	3.158	17142	39	102.2	1.183	3098	84	183.2	0.375	810

TROUBLESHOOTING

4-2-1. If the trouble is detected by self-diagnosis

- The error of sensor will be displayed on the front of display.
  When the error of sensor is detected at initial power ON, the appliance will operated by the emergency mode and display of abnormal sensor part will blink.
- The appliance will not stop operating when the error of sensor is detected during operation of the appliance.
  But normal freezing might be not operated if the appliance is operated by the emergency operation mode. You would better to check the appliance according to the self-diagnosis of the manual.

1) If ICE Maker(R) Sensor has troubled

ERROR Code

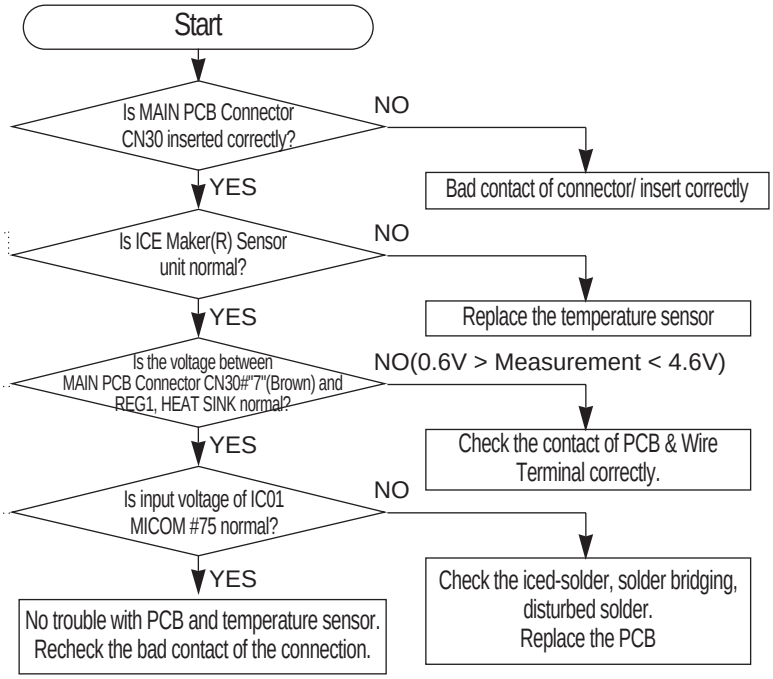
DATA1.
Temperature table

** Measuring point of resistance value according to Sensor **
ICE MAKER(R) : CN30#7 ↔CN76#1 measuring resistance value
** 0 Ω : Short trouble / ∞ Ω : Open trouble

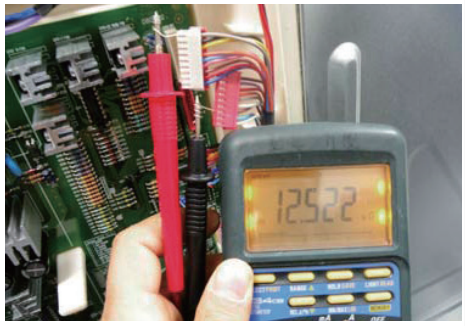
Refer to circuit diagram in the manual

Sensor MICOM/Connector number	
ICE Maker(R)	Connector CN30-"7"(Brown) and REG1 HEAT-SINK PCB common Ground
Voltage measured between 4.6V ~ 0.6V.	

Measuring voltage of IC01 MICOM #75, CN30-"7"(Brown) and REG1, HEAT SINK from PCB typical Ground part are similar.
→ Check the measure on the SENSOR MARKING #4(R312) due to the SMD MICOM

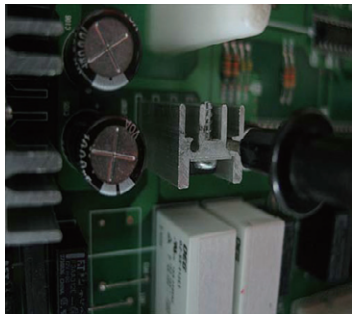


☞ Checking Method of ICE MAKER(R) Senser resistance CN30 #7(Brown) ↔ CN76 #1"(Gray)
- Compare the temperature table after the measure.



☞ Checking method of ICE Maker(R) Sensor voltage
- Measure the voltage of Sensor Check Point #4(IC01 MICOM #75) or CN30#7(Brown) ↔ REG1, HEAT SINK.
- Compare the temperature table after the measure. Measuring voltage of CN30#4(Brown) ↔ REG1, HEAT SINK are below.

typical PCB Ground
REG1 HEAT-SINK



2) If ICE Maker(F) Sensor has troubled(RFG238 MODEL)

ERROR Code

※ This refrigerator has Dual Ice Maker, so controlled two Ice Makers.

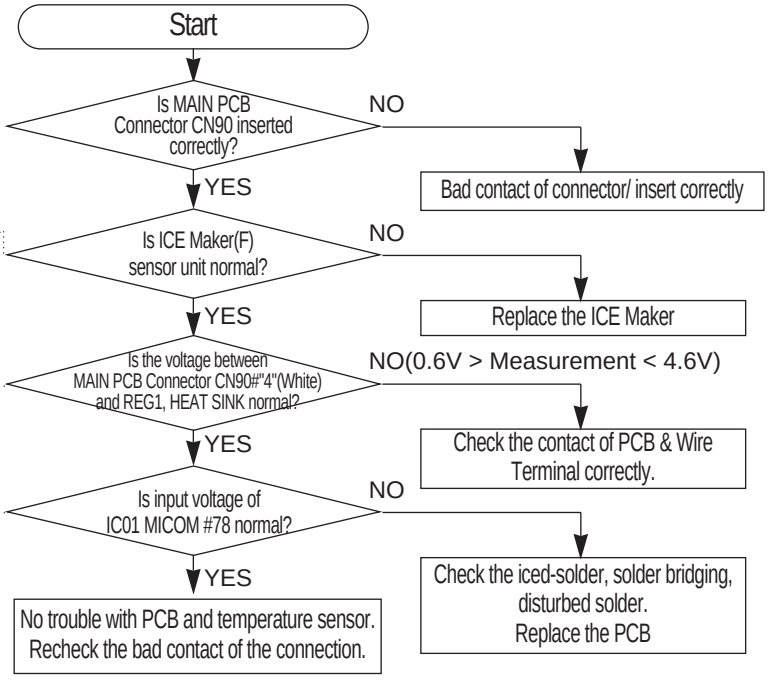
DATA1.
Temperature table

** Measuring point of resistance value according to Sensor **
ICE MAKER(F) : CN90 #3 or #8 ↔ #4 measuring resistance value
** 0 Ω : Short trouble / ∞ Ω : Open trouble

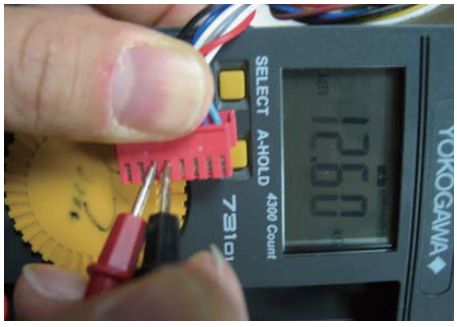
Refer to circuit diagram in the manual

Sensor MICOM/Connector number	
ICE Maker(F)	Connector CN90-#4(White) and REG1 HEAT-SINK PCB common Ground
Voltage measured between 4.6V ~ 0.6V.	

Measuring voltage of IC01 MICOM #78, CN90#4(White) and REG1, HEAT SINK from PCB typical Ground part are similar.
→ Check the measure on the SENSOR MARKING #9(R901) due to the SMD MICOM.

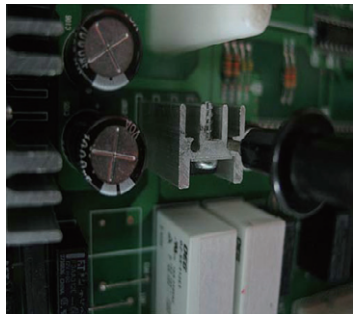


☞ Checking Method of ICE MAKER(R) Senser resistance CN90 #3(white) or #8(Sky_blue) ↔ #4(White)
- Compare the temperature table after the measure.



☞ Checking method of ICE Maker(F) Sensor voltage
- Measure the voltage of Sensor Check Point #9(IC01 MICOM #78) or CN90#4(white) ↔ REG1, HEAT SINK.
- Compare the temperature table after the measure. Measuring voltage of CN90#4(White) ↔ REG1, HEAT SINK are below.

typical PCB Ground
REG1 HEAT-SINK



3) If R Sensor has trouble

ERROR Code

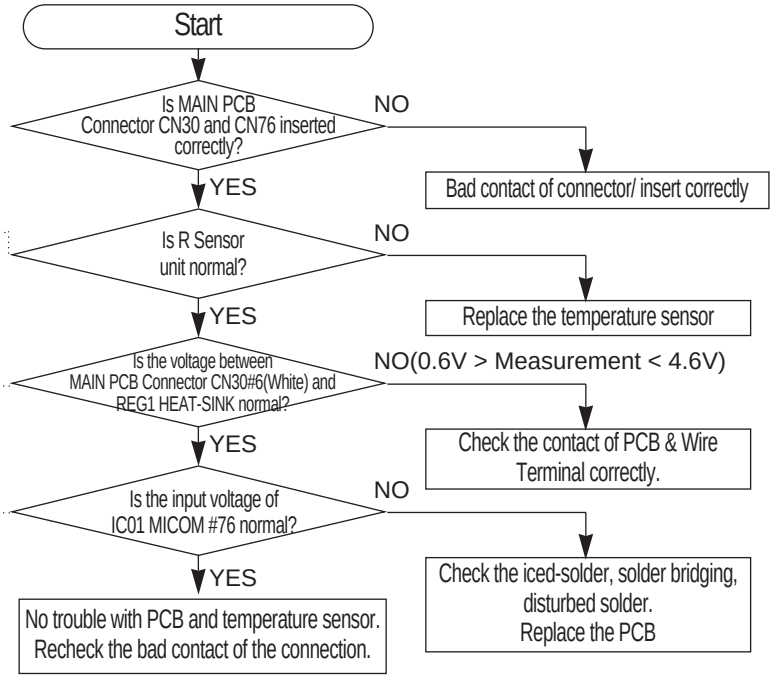
DATA1.
Temperature table

** Measuring point of resistance value according to Sensor **
R : CN30#6 ↔ CN76#1 measuring resistance value
** 0 Ω : Short trouble / ∞ Ω : Open trouble

Refer to circuit diagram in the manual

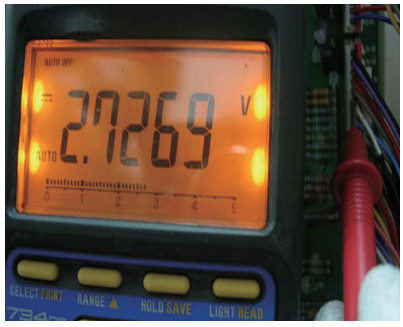
Sensor MICOM/Connector number	
R	Connector CN30#6(White) to REG1 HEAT-SINK PCB typical Ground
Voltage measured between 4.6V ~ 0.6V.	

Measuring voltage IC01 MICOM #76,
CN30#6(White) and REG1, HEAT SINK
from PCB typical Ground part are similar.
→ Check the measure on the SENSOR MARKING #3(R311) due to the SMD MICOM

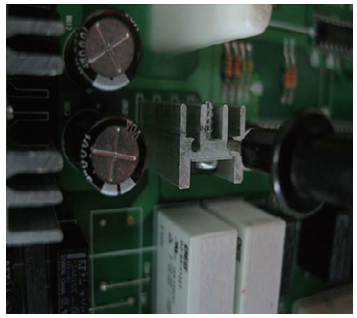


☞ Checking method of R Sensor resistance
CN30#6(White) ↔ CN76#1(Gray) Compare the temperature table after measurment.

☞ Checking method of R Sensor resistance
- Measure the voltage of Sensor Check Point #3(IC01 MICOM #76) on PCB or CN30#6(White) ↔ REG1, HEAT SINK
- Compare the temperature table after measurement.
Measuring voltage of CN30#6(White) ↔REG1, HEAT SINK are as below.



Typical PCB Ground
REG1, HEAT SINK



4) If R DEF Sensor has trouble

ERROR Code

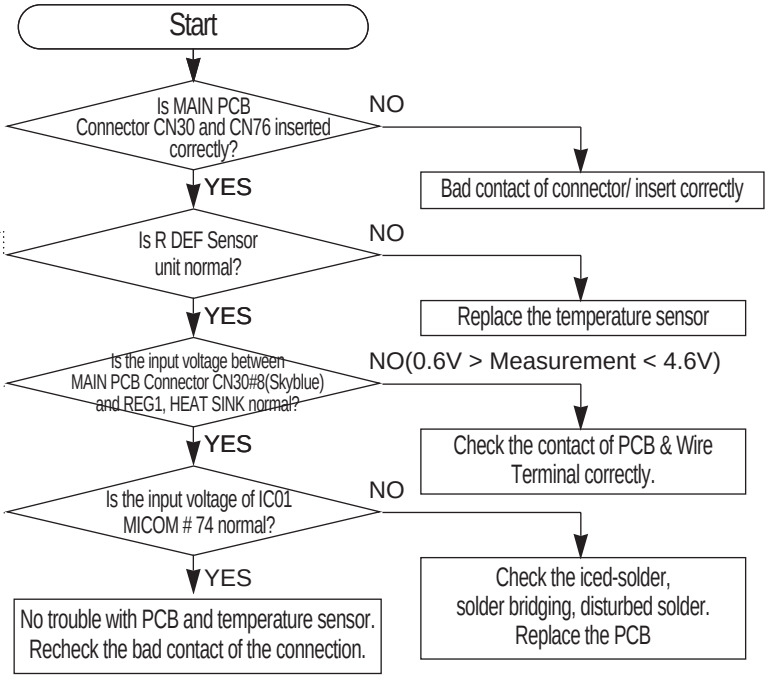
DATA1.
Temperature table

** Measuring point of resistance value according to Sensor **
R-DEF : CN30#8 ↔ CN76#1 measuring resistance value
** 0 Ω : Short trouble / ∞ Ω : Open trouble

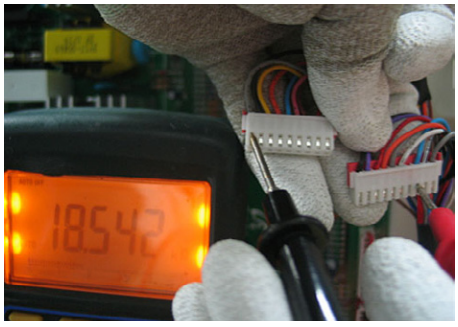
Refer to circuit diagram in the manual

Sensor MICOM/Connector Number	
R DEF	Connector CN30-"8"(Sky-blue) and REG1, HEAT SINK PCB common Ground
Voltage measured between 4.6V ~ 0.6V.	

Measuring voltage of IC01 MICOM #74, CN30#8(Sky-blue) and REG1, HEAT SINK from PCB typical Ground part are similar.
→ Check the measure on the SENSOR MARKING #5(R313) due to the SMD MICOM

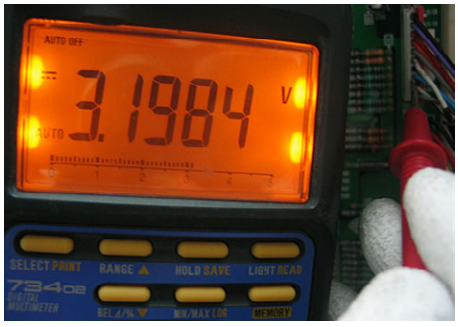


☞ Checking method of R Sensor resistance
CN30#8(Sky-blue) ↔ CN76#1(Gray)
- Compare the temperature table after measurement.

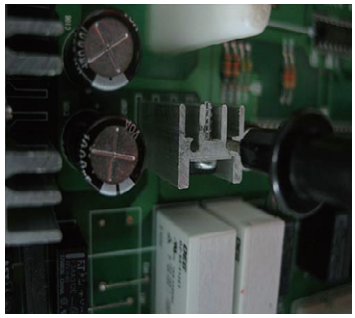


☞ Checking method of R DEF Sensor resistance
- Measure the voltage of Sensor Check Point #5(IC01 MICOM #74) on PCB or CN30#8(Sky-blue)↔REG1, HEAT SINK
- Compare the temperature table after measurement.

Measuring voltage of CN30#8(Sky-blue) ↔ REG1, HEAT SINK are as below.



Typical PCB Ground
REG1, HEAT SINK



5) If Ambient Sensor has trouble

ERROR Code

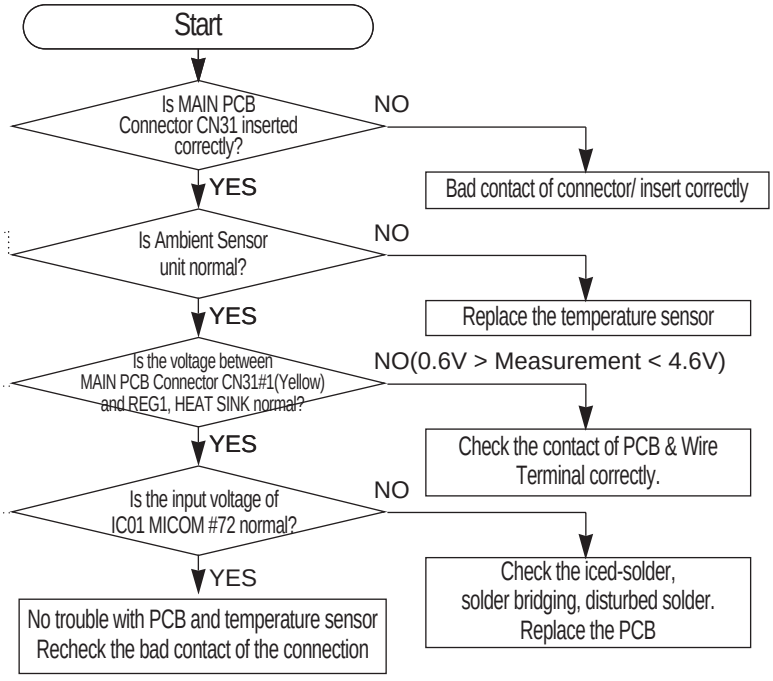
DATA1.
Temperature table

** Measuring point of resistance value according to Sensor **
Ambient : CN31#1 ↔ #4 measuring resistance value
** Placed in the right top table of upper hinge.
** 0 Ω : Short trouble / ∞ Ω : Open trouble

Refer to circuit diagram in the manual

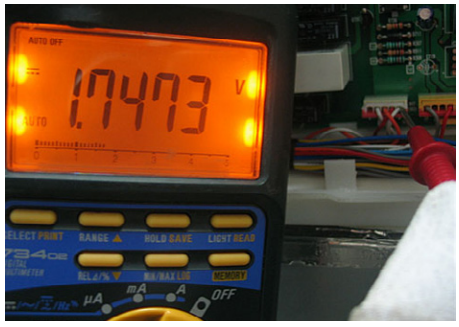
Sensor MICOM/Connector number	
Ambient	Connector CN31#1(Yellow) to REG1, HEAT-SINK PCB typical Ground
Voltage measured between 4.6V ~ 0.6V.	

Measuring voltage of IC01 MICOM #72, CN31#1(Yellow) and REG1, HEAT SINK from PCB typical Ground part are similar.
→ Check the measure on the SENSOR MARKING #7(R307) due to the SMD MICOM

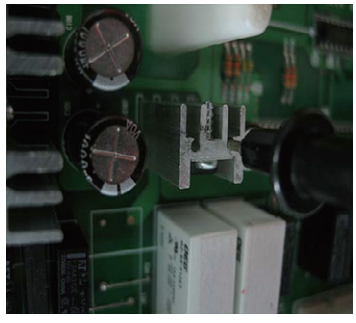


☞ Checking method of Ambient Sensor resistance
CN31#1(Yellow) ↔ #4(Yellow)
- Compare the temperature table after measurement.

☞ Checking method of Ambient Sensor voltage
- Measure the voltage of Sensor Check Point #7(IC01 MICOM #72) on PCB or CN31#1(Yellow) ↔ REG1, HEAT SINK
- Compare the temperature table after measurement.
Measuring voltage of CN31#1(Yellow) ↔ REG1, HEAT SINK are as below



Typical PCB Ground
REG1 Heater Sink



6) If F Sensor has trouble

ERROR Code

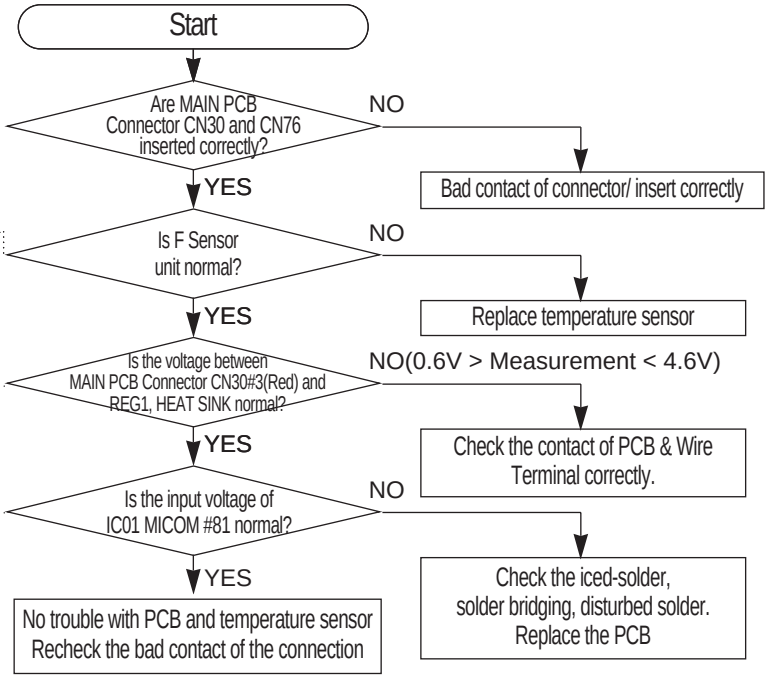
DATA1.
Temperature table

** Measuring point of resistance value according to Sensor **
F : CN30#3 ↔ CN76#1 measuring resistance value
** 0 Ω : Short trouble / ∞ Ω : Open trouble

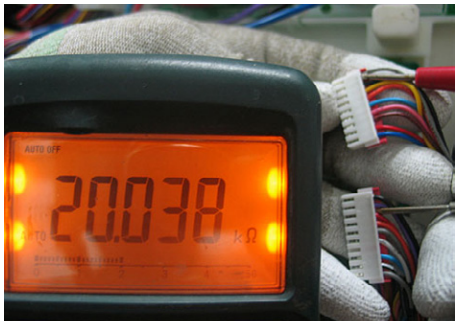
Refer to circuit diagram in the manual

Sensor MICOM/Connector number	
F	Connector CN30#3(Red) to REG1, HEAT SINK PCB typical Ground
Voltage measured between 4.6V ~ 0.6V.	

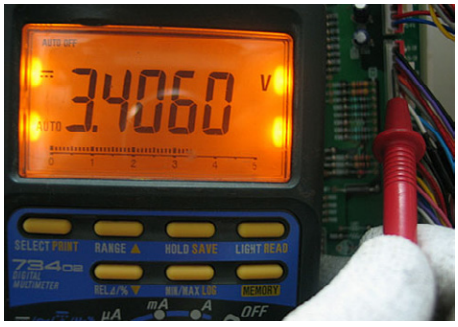
Measuring voltage of IC01 MICOM #81, CN30#3(Red) and REG1, HEAT SINK from PCB typical Ground part are similar.
→ Check the measure on the SENSOR MARKING #1(R309) due to the SMD MICOM



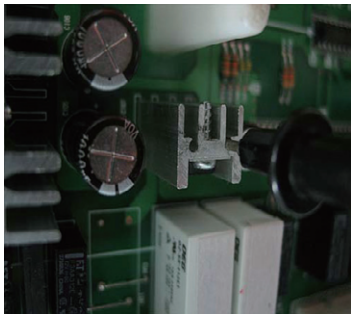
☞ Checking method of F Sensor resistance
CN30#3(Red) ↔ CN76#1(Gray)
- Compare the temperature table after measurement.



☞ Checking method of F Sensor voltage
- Measure the voltage of Sensor Check Point #1(IC01 MICOM #81) on PCB or CN30#3(Red) ↔ REG1, HEAT SINK
- Compare the temperature table after measurement.
Measuring voltage of CN30#3(Red) ↔ REG1, HEAT SINK are as below.



Typical PCB Ground
REG1 Heater Sink



7) If F DEF Sensor has trouble

ERROR Code

DATA1.
Temperature table

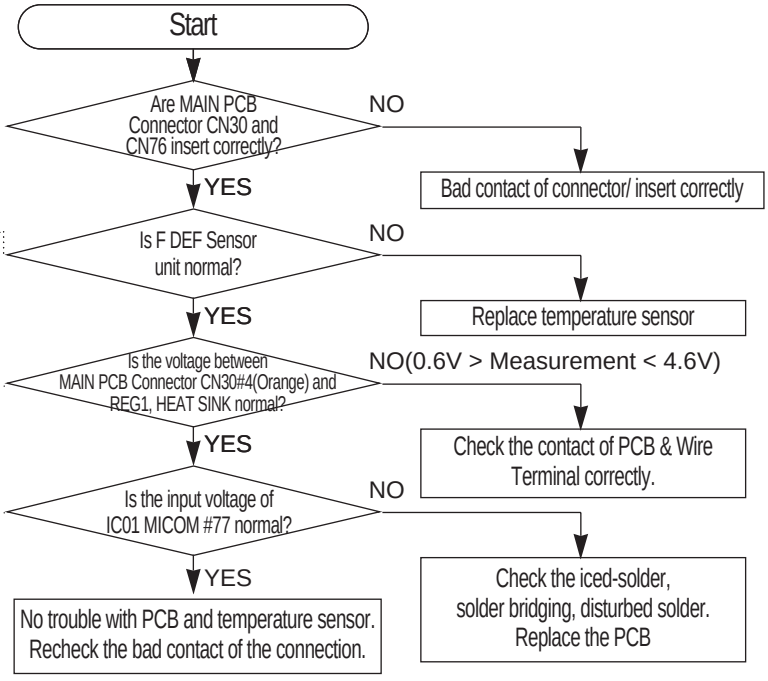
** Measuring point of resistance value according to Sensor **
F-DEF : CN30#4 ↔ CN76#1 measuring resistance value
** 0 Ω : Short trouble / ∞ Ω : Open trouble

Refer to circuit diagram in the manual

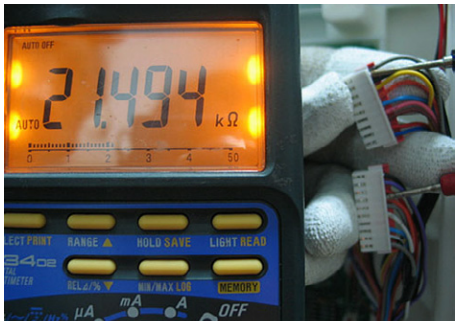
Sensor MICOM/Connector number	
F DEF	Connector CN30#4(Orange) to REG1, HEAT SINK PCB typical Ground

Voltage measured between 4.6V ~ 0.6V.

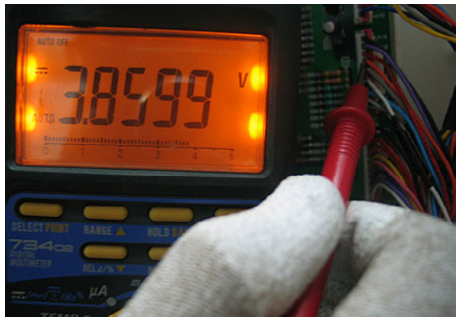
Measuring voltage of IC01 MICOM #77, CN30#4(Orange) and REG1, HEAT SINK from PCB typical Ground part are similar.
→ Check the measure on the SENSOR MARKING #2(R310) due to the SMD MICOM



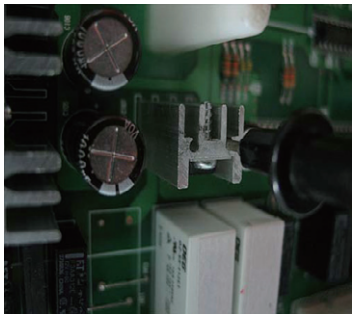
☞ Checking method of F DEF Sensor resistance
CN30#4(Orange) ↔ CN76#1(Gray)
- Compare the temperature table after measurement.



☞ Checking method of F DEF Sensor voltage
- Measure the voltage of Sensor Check Point #2(IC01 MICOM #77) on PCB or CN30#4(Orange) ↔ REG1, HEAT SINK
- Compare the temperature table after measurement.
Measuring voltage of CN30#4(Orange) ↔ REG1, HEAT SINK are as below



Typical PCB Ground
REG1, Heater Sink



8) If Ice Room Sensor has trouble

ERROR Code

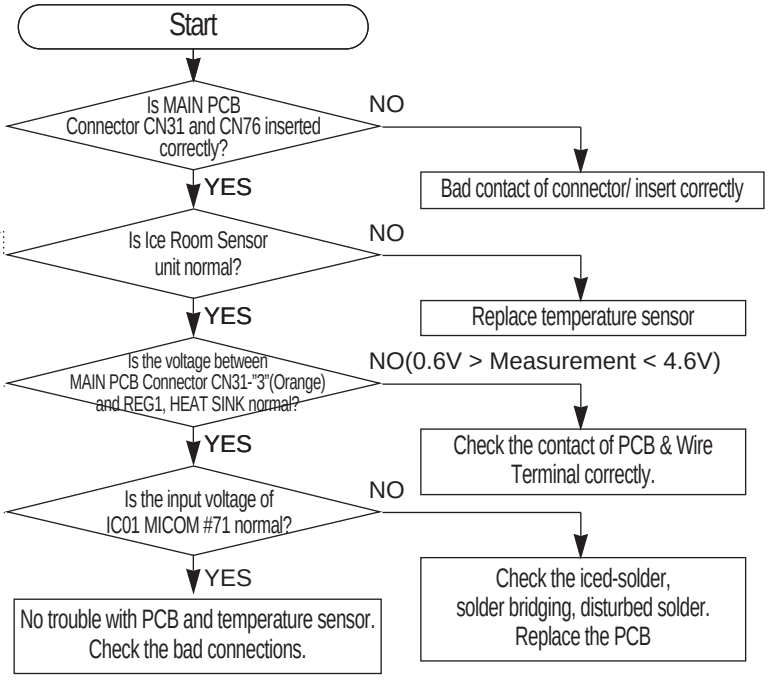
DATA1.
Temperature table

** Measuring point of resistance value according to Sensor **
Ambient : CN32#3 ↔ CN76#1 Measure the resistance value
** 0 Ω : Short trouble / ∞ Ω : Open trouble

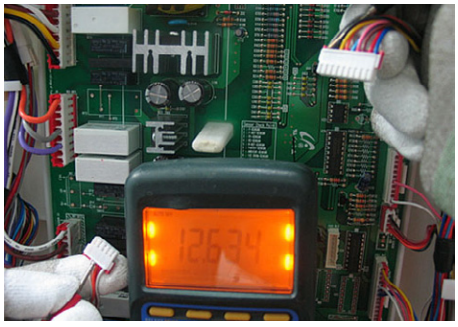
Refer to the circuit diagram in this manual

Sensor MICOM/Connector number	
Ice Room	Connector CN31-"3"(Orange) and REG1, HEAT SINK from typical PCB Ground
Voltage measured between 4.6V ~ 0.6V.	

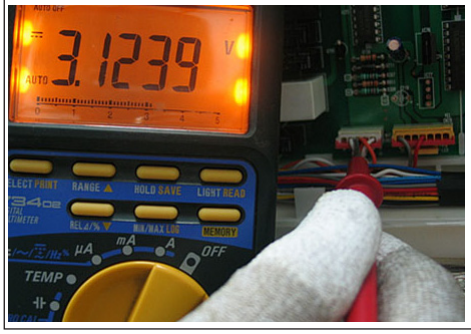
Measuring voltage of IC01 MICOM #71, CN31-"3"(Orange) and REG1, HEAT SINK from typical PCB Ground are similar.
→ Check the measure on the SENSOR MARKING #8(R308) due to the SMD MICOM



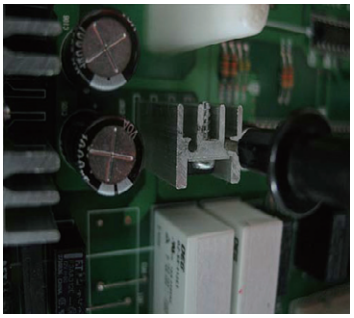
☞ Checking Mehod of Ice Room Sensor voltage
CN31-"3"(Orange) ↔ CN76-"1" (Gray)
- Compare with the temperature table after measurement.



☞ Checking Method of Ice Room Sensor Voltage
- Measure the voltage of sensor checking point #8(IC01 MICOM #71) on PCB or CN31-"3" (Orange) ↔ REG1, HEAT SINK
- Compare with the temperature table after measurement.
Measured voltage of CN31-"3" (Orange) ↔ REG1, HEAT SINK are as below



Typical PCB Ground
REG1, HEAT SINK



9) If Pantry Sensor has trouble

ERROR Code

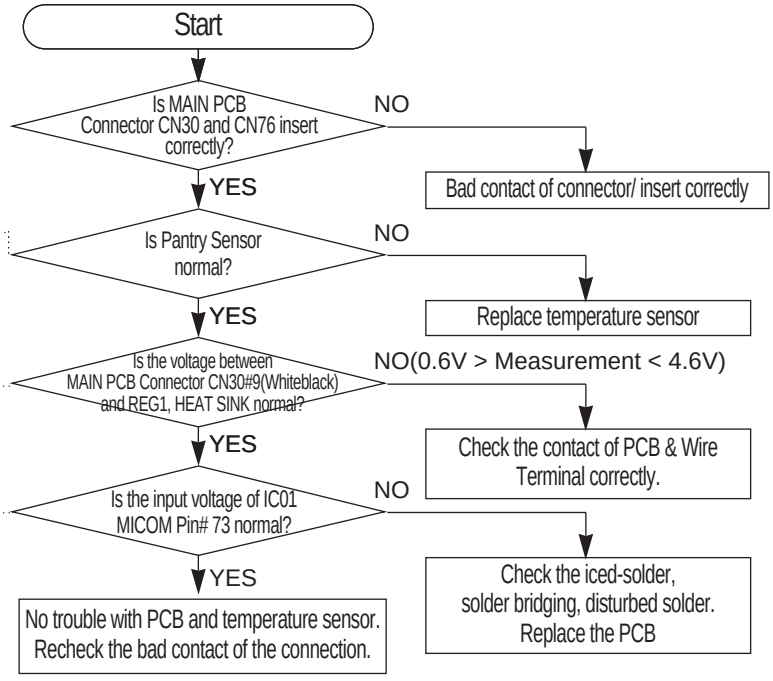
DATA1.
Temperature table

** Measuring point of resistance value according to Sensor **
Pantry : CN30#9 ↔ CN76 #1 measuring resistance value
** 0 Ω : Short trouble / ∞ Ω : Open trouble

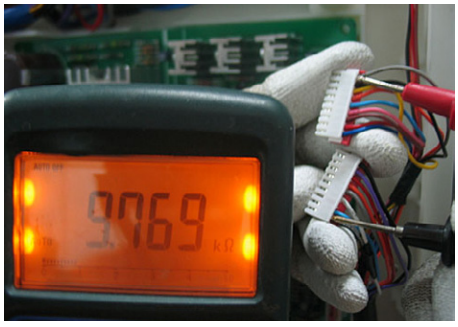
Refer to circuit diagram in the manual

Sensor MICOM/Connector number	
Pantry	Connector CN30#9(White-black) to REG1 HEAT SINK PCB typical Ground
Voltage measured between 4.6V ~ 0.6V.	

Measuring voltage of IC01 MICOM #73,
CN30#9(White-black) and REG1, HEAT SINK
from PCB typical Ground part are similar.
→ Check the measure on the SENSOR MARKING #6(R314) due to the SMD MICOM

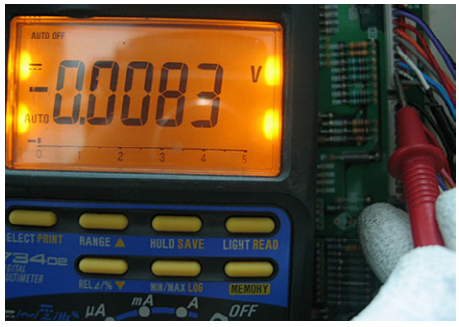


☞ Checking method of Pantry Sensor resistance
CN30#9(White-black) ↔ CN76#1(Gray)
- Compare the temperature table after measurement.

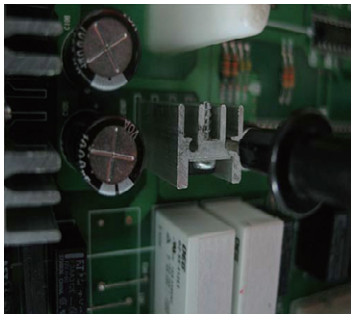


☞ Checking method of Pantry Sensor voltage
- Measuring voltage of Sensor Check Point #6(IC01 MICOM #73) on PCB or CN30#9(White-black) ↔ REG1, HEAT SINK
- Compare the temperature table after measurement.

Measuring voltage of CN30#9(white-black)↔REG1, HEAT SINK are as below

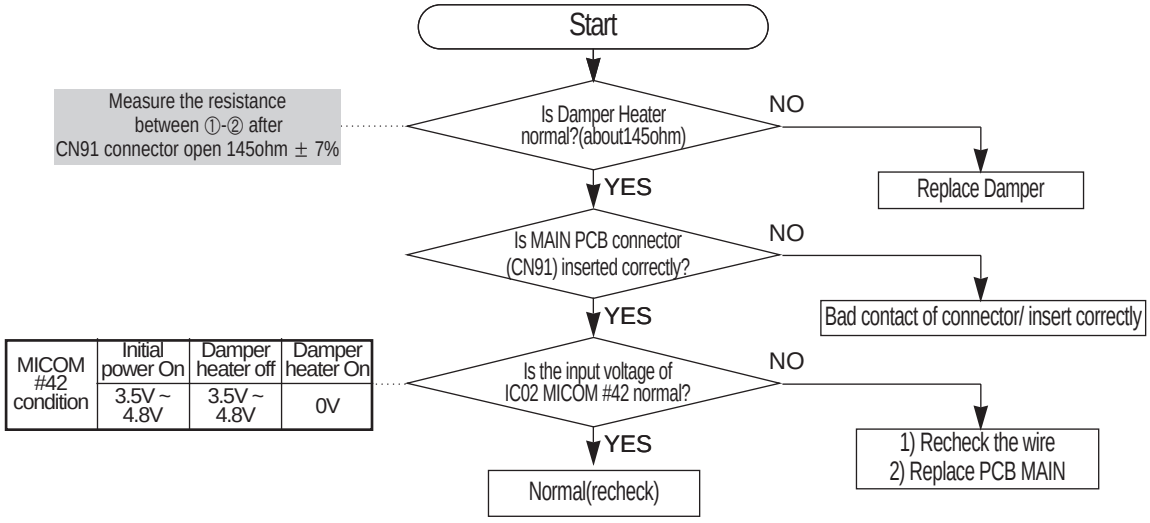


Typical PCB Ground
REG1 Heater Sink



10) If Pantry Room Damper Heater has trouble

ERROR Code

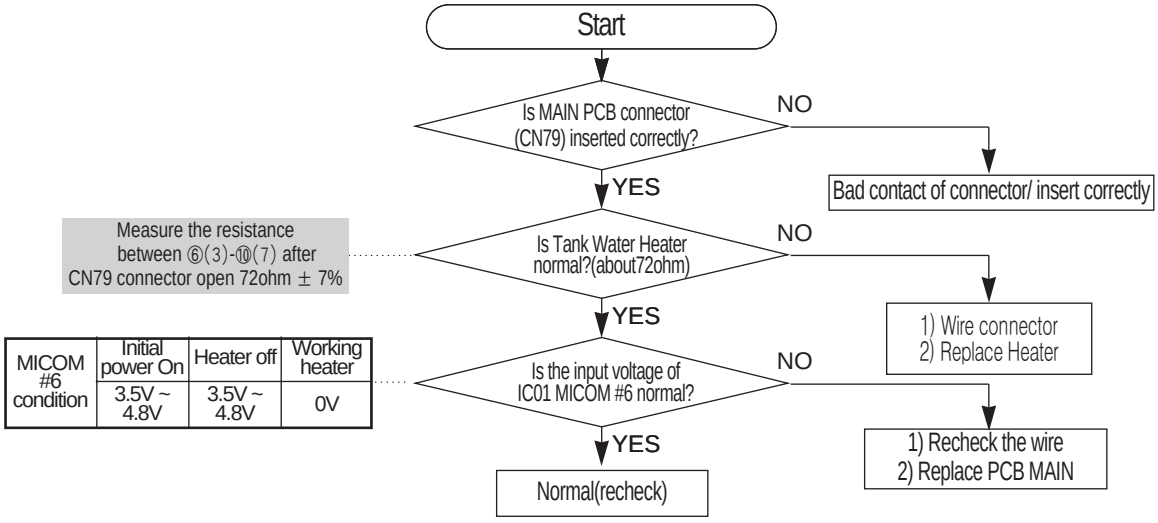


※ It could changed HEATER capacity by operation.

☞ Checking method of Pantry Room Damper resistance CN91#1(Black) ↔ #2(Brown)
** ∞ Ω : Open(wire disconnection, heater disconnection) trouble / 0 Ω : Short trouble

11) If Tank Water Heater has trouble

ERROR Code

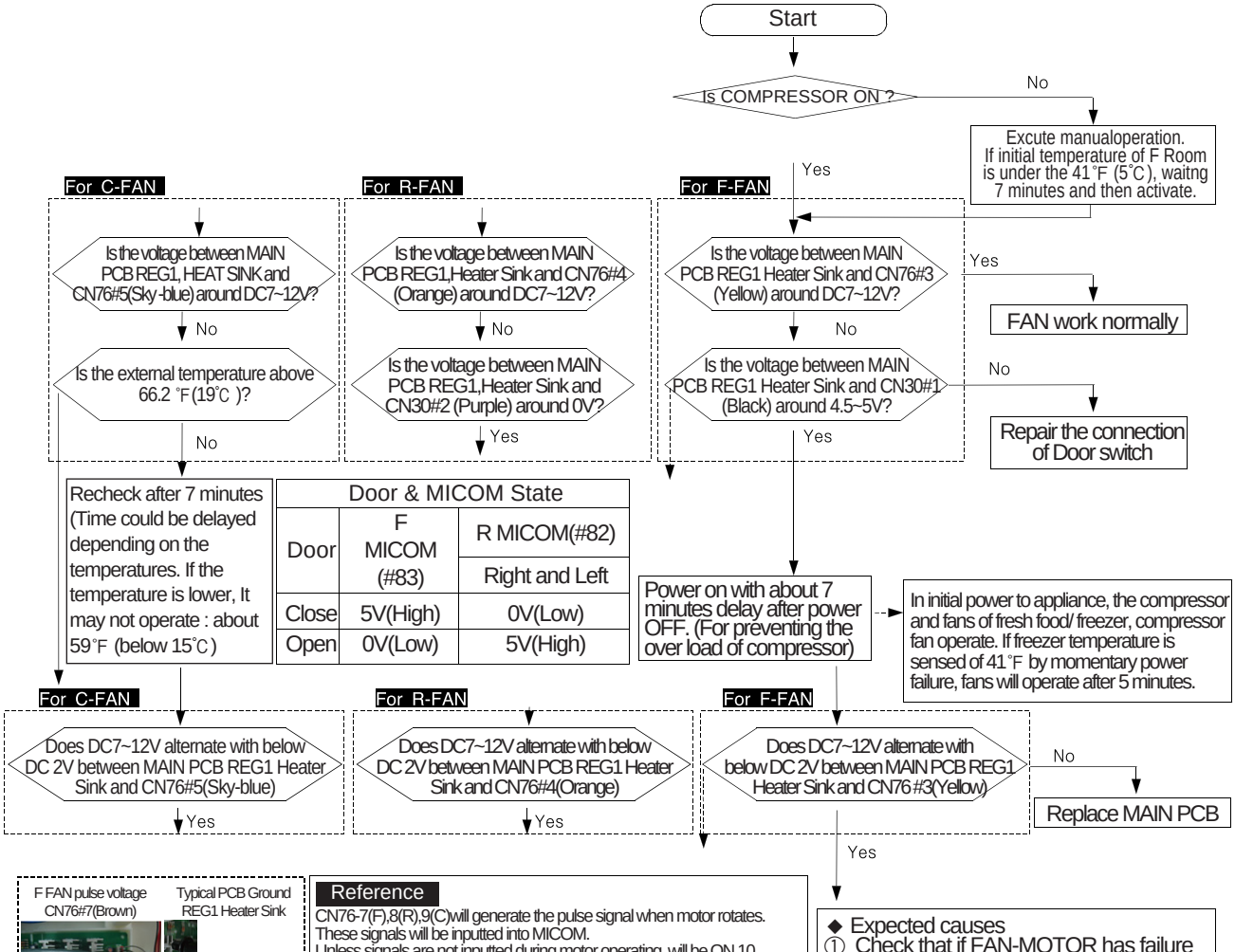


※ It could changed HEATER capacity by operation

☞ Checking method of Tank Water Heater resistance CN79#6(Pink) ↔ #10(White)
** ∞ Ω : Open(wire disconnection, heater disconnection) trouble / 0 Ω : Short trouble

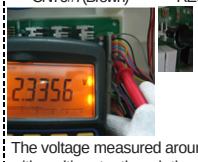
4-2-2. IF FAN does not operate(F, R, C - FAN)

- The refrigerator of this model has BLDC FAN motor. BLDC motor is driven by DC 7~12V.
- On the normal condition of COMP ON, it operates together with F-FAN motor.
  If door is opened and closed once at a high ambient temperature, it will be operated after 1 minute delay.
  Therefore, you are advised not to taken it for an error.
-. If there is a trouble, you should select the self-diagnostic function to check the trouble before power off.



F FAN pulse voltage CN76#7(Brown)

Typical PCB Ground REG1 Heater Sink



The voltage measured around 2~3V with multi-meter though the voltage is very weak because of pulse signal

Reference

CN76-7(F),8(R),9(C)will generate the pulse signal when motor rotates.
These signals will be inputted into MICOM.
Unless signals are not inputted during motor operating, will be ON 10 seconds after fan Off. But if signals are not still entered, the above operation will restart four times more.
If signals are not entered continuously, the motor will be restarted after 10 seconds.
This function is effective when the normal operation of motor would be restrained by foreign matters such as ice.

◆ Expected causes
① Check that if FAN-MOTOR has failure itself.
② Check that if wiring connection has bad contact.
③ Check the input of the fan motor rotation pulse when motor fan operates.

☞ Display for checking the self-diagnostic function

R FAN ERROR

F FAN ERROR

C FAN ERROR

☞ Checking method of R,F,C FAN Motor voltage
The voltage between PCB typical Ground REG1 Heater Sink and
F FAN ; CN76#3(Yellow) shall be less than DC 7~12V.
R FAN ; CN76#4(Orange) shall be less than DC 7~12V.
C FAN ; CN76#5(Sky-blue) shall be less than DC 7~12V.
- Motor rpm could be changed by capability without previous.

Typical PCB Ground REG1 Heater Sink

1) F-FAN

2) R-FAN

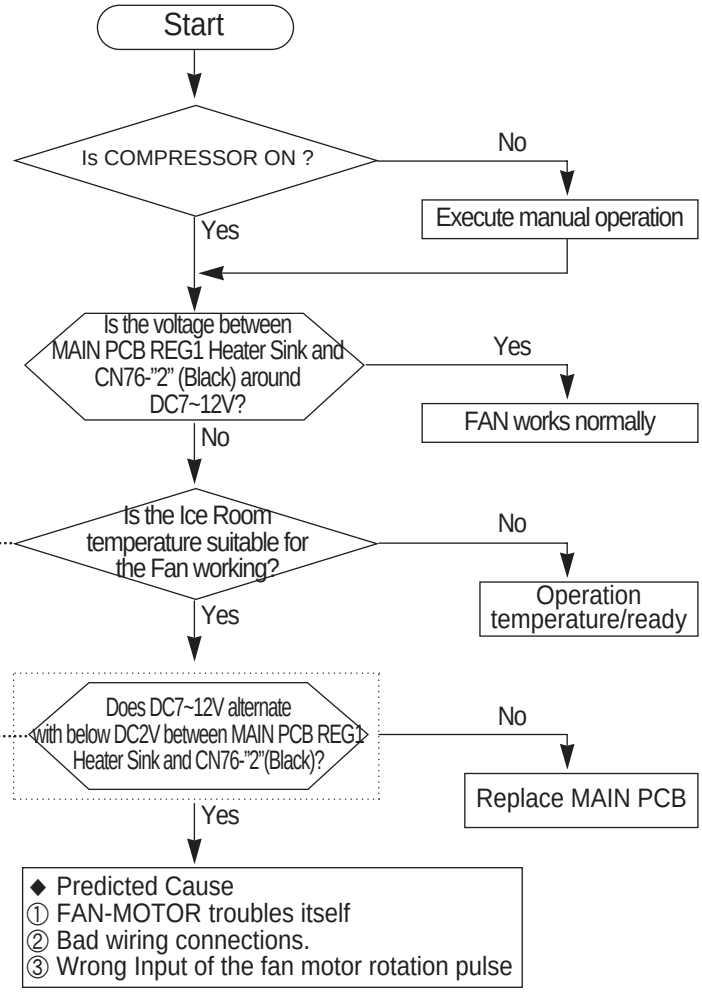
3) C-FAN

4-2-3. If ICE Room Fan does not operate

- This refrigerator has BLDC FAN motor. BLDC motor is driven by DC7~12V.
- When COMP ON, normally operates with F-FAN motor.
- If there is any trouble, you should select the self-diagnostic function to check the trouble before power off.

- When pressing the ICE TEST S/W for a certain period of time (over 1.5sec), the function is accomplished. After beginning of TEST mode, Ice maker heater turns on for initial 2 minutes, if the ice making temperature is below 0℃.
- If it exceeds 0℃, Ice maker heater turns on for initial 30 seconds.
- After Ice maker heater turns on for 30 seconds, it turns off and then Ice maker motor turns on.
- As the Ice maker motor turns on, TEST MODE COUNT operates. (6 minutes count)

Condition
- Ambient temperature : 32℃/75%
- Notch : 2℉/38℉(-19.0℃/3.3℃)
  Initial full of ice bucket capacity : 794 g, 58ea



Ice Room control temperature	
Ice ON	8.6℉(-13℃)
Ice OFF	26.6℉(-3℃)

Reference

CN76 #6 will generate the pulse signal when motor rotates.
These signals will be input into MICOM.
Unless signals are not input during motor operating, will be ON 10seconds after fan OFF. But if signals are not still taken, the above operation will be retried four times more. If signals are not taken continuously, the motor will be restarted after 10 minutes.
This function is against the case that motor movement would be restrained by foreign matters like ice.

FAN pulse voltage CN76-"6"(Pink)

Typical PCB Ground REG1 Heater Sink

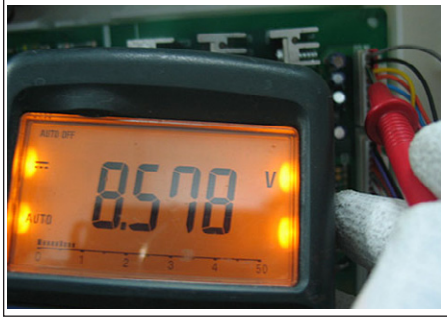
The voltage is variable due to pulse signal but measured about 2~3V with the Multi-Meter.

☞ Display for checking the self-diagnostic function

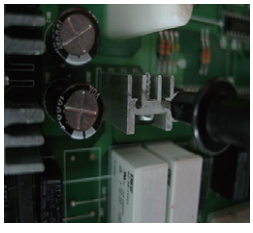
Ice Room FAN ERROR

☞ Checking method of Ice Room FAN Motor Voltage with the voltage between typical PCB Ground REG1 Heater Sink and Ice Room FAN ; CN76-"2"(Black) shall be less than DC 6~12V.
- Additional check if resistance values are different after measurement.

1) Ice Room - FAN



Typical PCB Ground REG1 Heater Sink



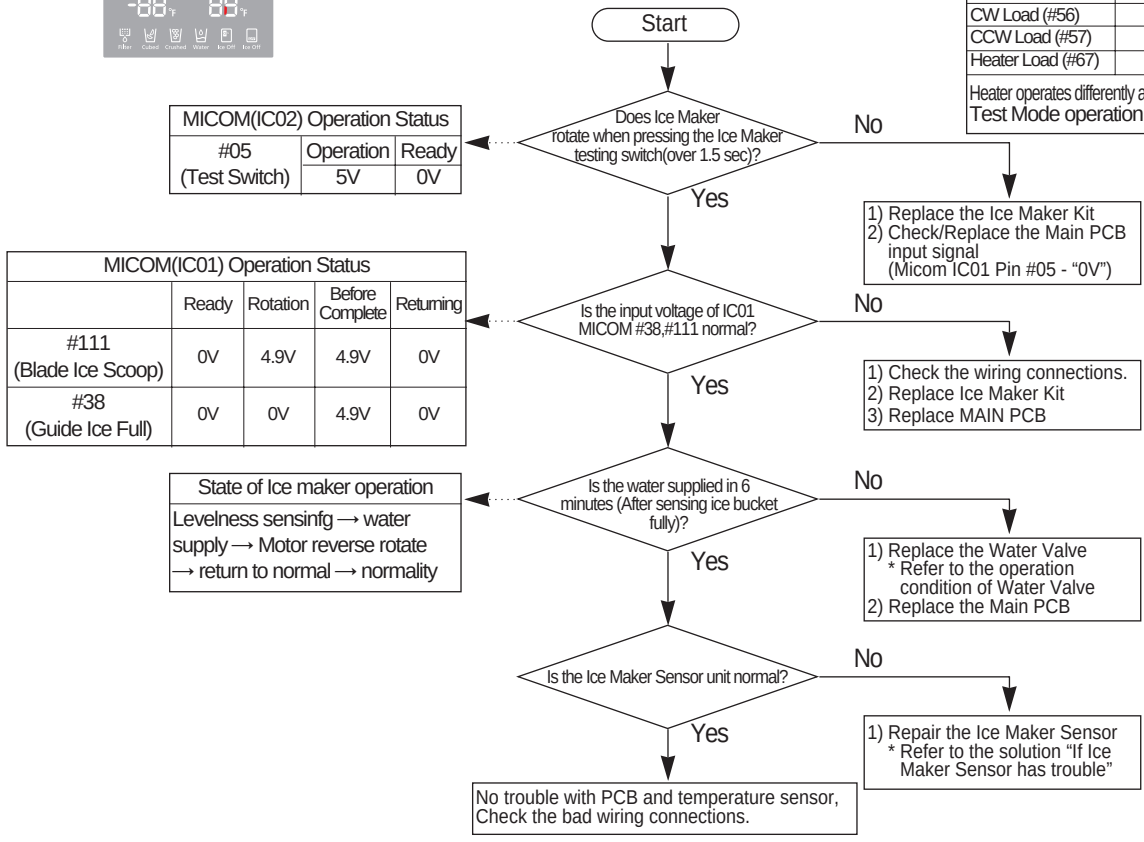
4-2-4. If Ice Maker does not operate

1. Water is automatically supplied to the Ice Maker depending on temperature & time condition and Ice Maker Dispenses cubed or crushed ice.
2. Power is applied to the one end of wires. Be careful when disassembling and shall refer to its exploded diagram in any case.
3. Ice Maker operation shall be checked after pressing the Ice Maker testing switch.
   (Freezer Ice Maker) It is not possible to check when the power is disengaged.
4. We recommend that TWO PEOPLE check the PCB and Ice Maker because they are located at front and rear side each.
5. Be careful! The Ice Maker Heater can cause personal injury like burn.
6. Ice maker could operate not only genuine rotate but also reverse rotate, so it is not out of order that reverse rotate.

Displays ERROR Code

Operating Condition when motor rotates Operating Status of Micom(IC01)		
	Ready	Operation
CW Load (#56)	0V	5V
CCW Load (#57)	0V	5V
Heater Load (#67)	0V	5V

Heater operates differently according to the conditions.
Test Mode operation will be 30 sec.



MICOM(IC02) Operation Status		
#05 (Test Switch)	Operation	Ready
	5V	0V

MICOM(IC01) Operation Status				
	Ready	Rotation	Before Complete	Returning
#111 (Blade Ice Scoop)	0V	4.9V	4.9V	0V
#38 (Guide Ice Full)	0V	0V	4.9V	0V

State of Ice maker operation
Levelness sensinfg → water supply → Motor reverse rotate → return to normal → normality

☞ Checking Method of ICE Maker Voltage
With typical PCB Ground REG1 Heater Sink and
1) Test Switch operation (press selected) : CN75-"5" (Black) shall be DC 0V.
   Test Switch ready ; CN75-"5" (Black) shall be less than DC 5V.

a)Test Switch operating
- When the refrigerator operate, the voltage is 0V.

b)Test Switch ready

Typical PCB Ground REG1 Heater Sink

☞ Checking Method of ICE Maker Voltage
With typical PCB Ground REG1 Heater Sink and
2) IC01 MICOM #111 voltage ; Ready(0V) → Rotate (4.9V) → Before complete(4.9V) → Return(0V)
   * MICOM #111 voltage is same as Connector CN50-"11"(Sky-Blue)
3) IC02 MICOM #38 voltage ; Ready(0V) → Rotate (0V) → Before complete(4.9V) → Return(0V)
   * MICOM #38 voltage is same as Connector CN90-"6"(Blue)

☞ Check the ICE Maker Heater & Motor Resistance

1) Measuring the Ice Maker Heater resistance values

CN70-"11"(Gray) -"1"(Black)

Resistance value : 91(365)Ohm± 30%

2) Measuring the Ice Maker Motor resistance values

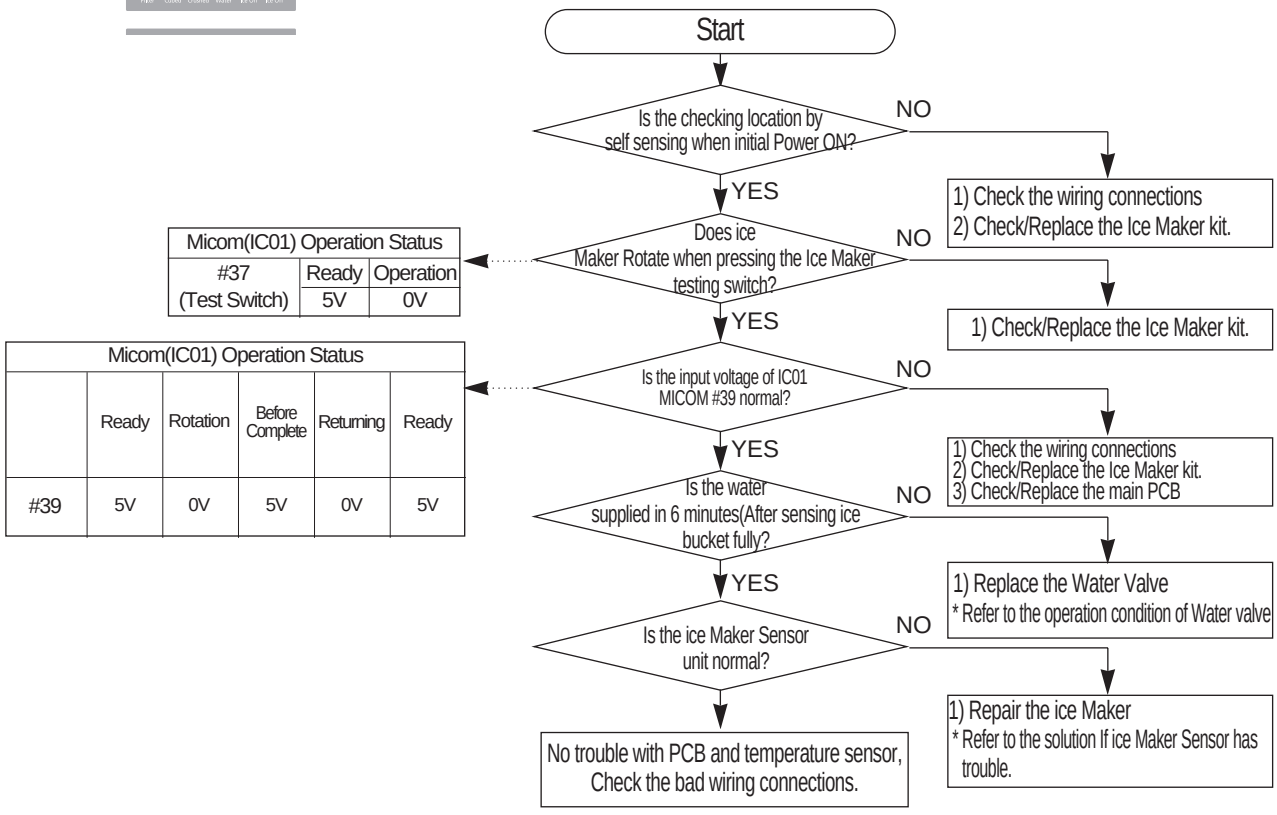
CW: 13P-"11"(White) and CN70-"9"(Red)
CCW: 13P-"13"(Pink) and CN70-"9"(Red)

Resistance value : 200KOhm± 30%

4-2-5. If ICE MAKER(F) does not operate(RFG238 MODEL)

1. Water is automatically supplied to the Ice Maker depending on temperature & time condition and Ice Maker Dispenses cubed or crushed ice.
2. Power is applied to the one end of wires. Be careful when disassembling and shall refer to its exploded diagram in any case.
3. Ice Maker operation shall be checked after pressing the Ice Maker testing switch. (Freezer Ice Maker) It is not possible to check when the power is disengaged.
4. We recommend that TWO PEOPLE check the PCB and Ice Maker because they are located at front and rear side each.

ERROR Code



Micom(IC01) Operation Status

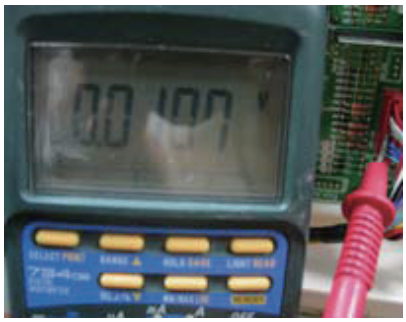
	Ready	Operation
#37 (Test Switch)	5V	0V

Micom(IC01) Operation Status

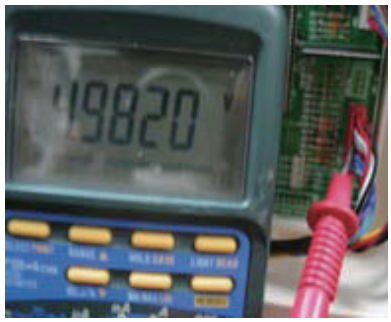
	Ready	Rotation	Before Complete	Returning	Ready
#39	5V	0V	5V	0V	5V

☞ Checking Method of ICE Maker Voltage With typical PCB Ground REG1 Heater Sink and
1) Test Switch operation(press selected) ; CN90-"5"(Gray) shall be DC 0V.
Test Switch ready ; CN90-"5"(Gray) Shall be less than DC 5V.

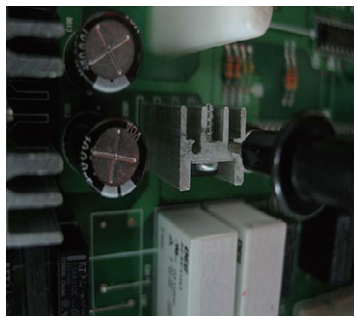
1) Test Switch operating



1) Test Switch ready



typical PCB Ground
REG1 HEAT-SINK



☞ Checking Method of ICE Maker Voltage With typical PCB Ground REG1 Heater Sink and
2) IC01 MICOM #39 voltage ; Ready(0V) → Rotate(0V) → Before complete(5V) → Return(0V) → Ready(5V)
* MICOM #39 voltage is same as Connector CN90-"7"(Purple)

4-2-6. If defrost does not operate (F,R DEF Heater)

- If defrost has trouble, select the self-diagnostic function to detect the error of defrost heater before Power Off. (Check the function with the self-diagnostic function)

R DEF ERROR

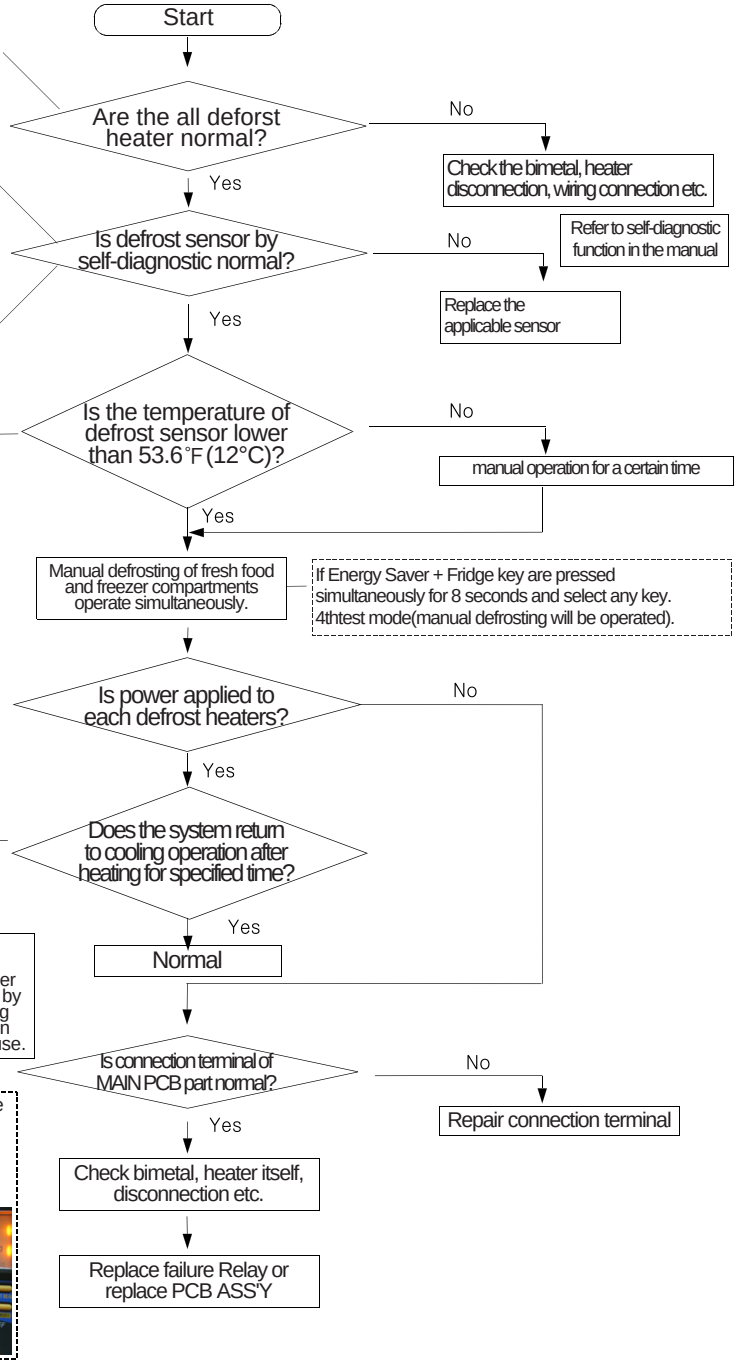
F DEF ERROR

Measuring point of resistance value according to heater
F-DEF(Ice Duct parallel) : CN70#7(Brown) ↔ CN71#9 (Orange) measuring resistance value(55 ohm ± 7%)
R-DEF : CN70#5(White)↔CN71#9(Orange) measuring resistance value(110 ohm ± 7%)
** 0Ω : Short trouble / ∞Ω : Open(bimetal, heater) trouble

**Measuring point of resistance value according to sensor **
F-DEF : CN30#4 ↔ CN76#1 measuring resistance value
R-DEF : CN30#8 ↔ CN76#1 measuring resistance value
** 0Ω : Short trouble / ∞Ω : Open trouble

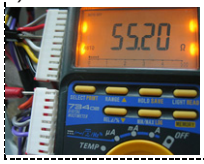
Resistance value of sensor according to temperature		
86°F(30°C)	4.22㏀	If you need the temperature with detail, refer to DATA1. temperature table
68°F(20°C)	6.05㏀	
50°F(10°C)	8.87㏀	
32°F(0°C)	13.29㏀	
14°F(-10°C)	20.42㏀	
-4°F(-20°C)	32.23㏀	
-22°F(-30°C)	52.41㏀	

**Measuring point of resistance value according to sensor **
F-DEF : CN30#4 ↔ CN76#1 measuring resistance value
R-DEF : CN30#8 ↔ CN76#1 measuring resistance value
** 0V: Short trouble / 5V: Open trouble

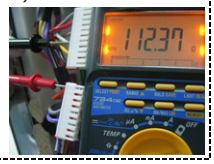


☞ Checking method of F,R DEF Heater resistance value
F DEF ; CN70#7(Brown) ↔ CN71#9(Orange)
R DEF ; CN70#5(White) ↔ CN71#9(Orange)
- Recheck if resistance values are different after the test

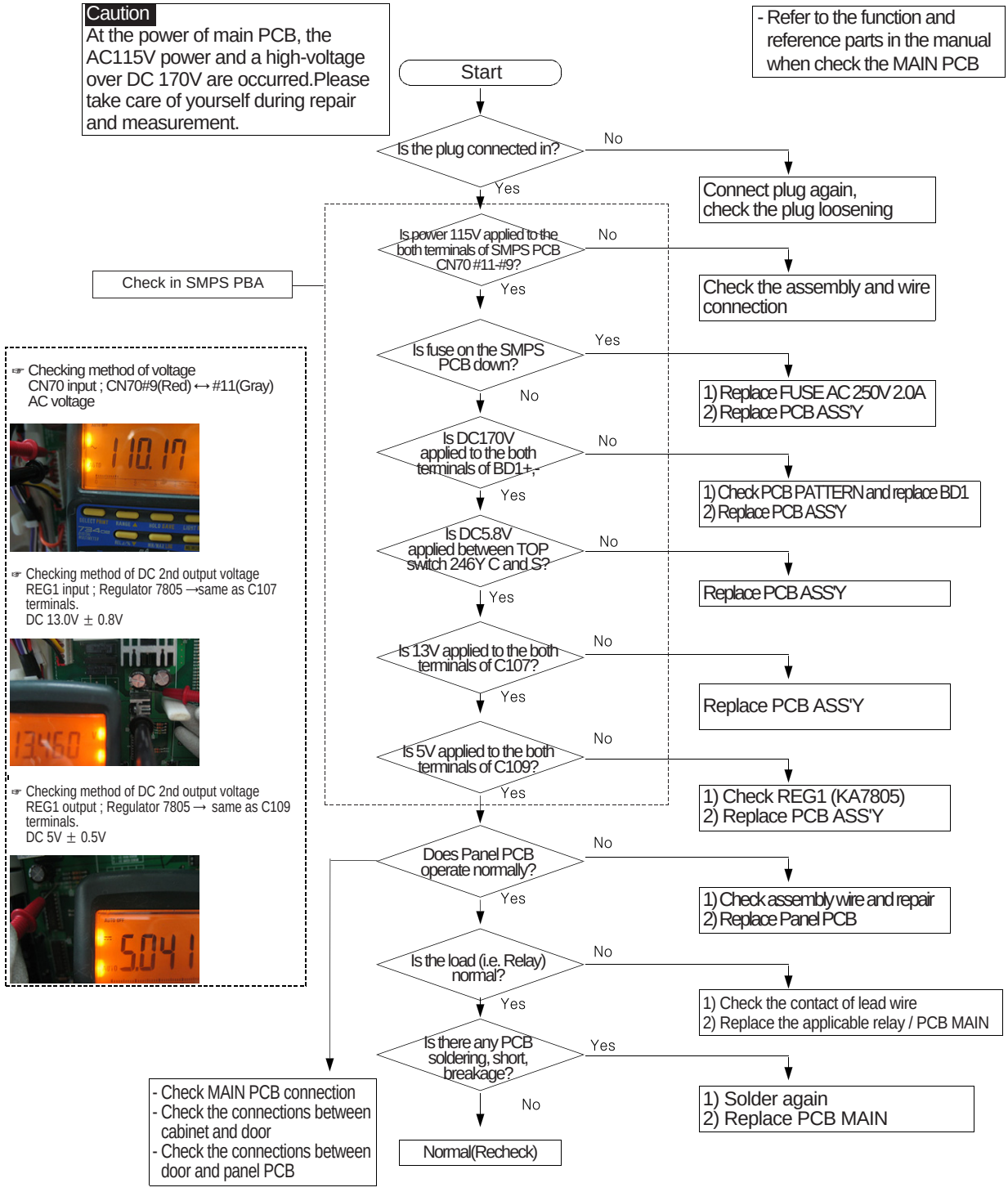
1) F DEF Heater



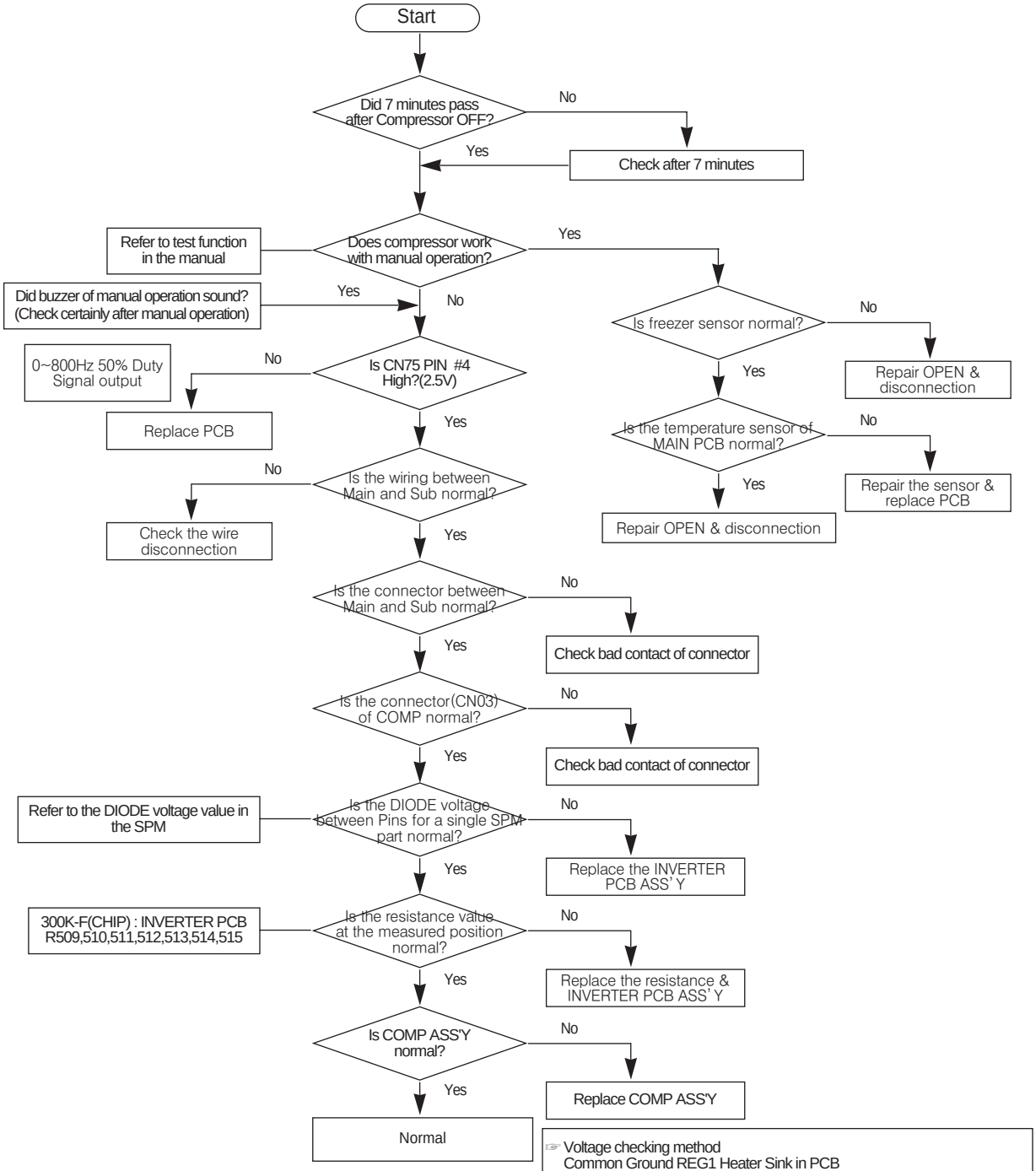
2) R DEF Heater



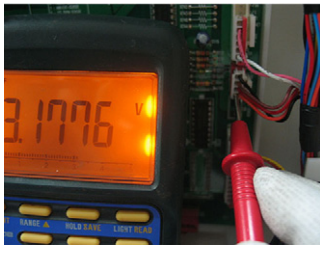
4-2-7. If Power is not supplied



4-2-8. If compressor does not operate

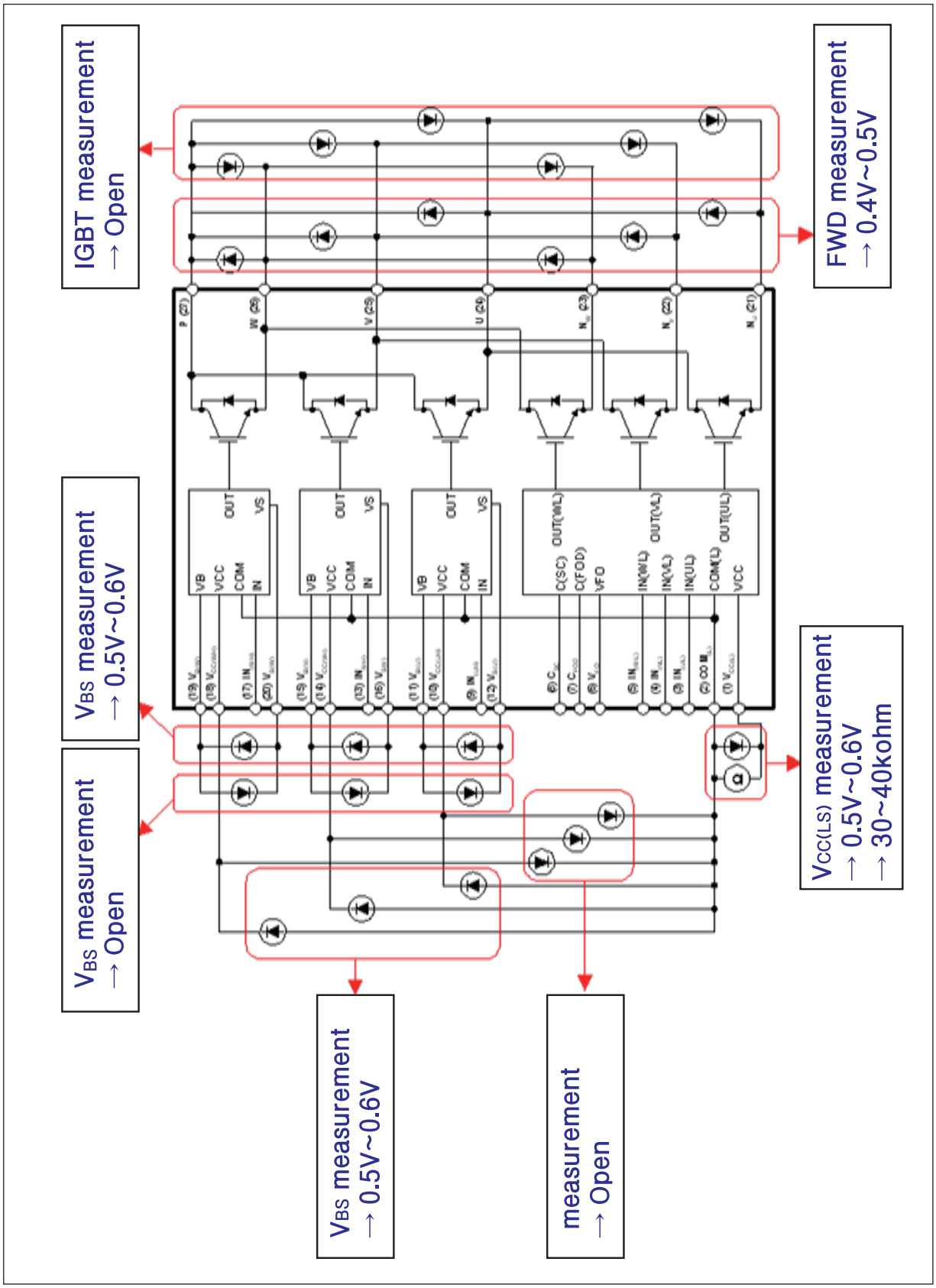


☞ Voltage checking method
Common Ground REG1 Heater Sink in PCB and 1) IC01 MICOM #4 ; Square wave voltage → 3V measured after MULTI TEST IC01 MICOM #4, COMP operates



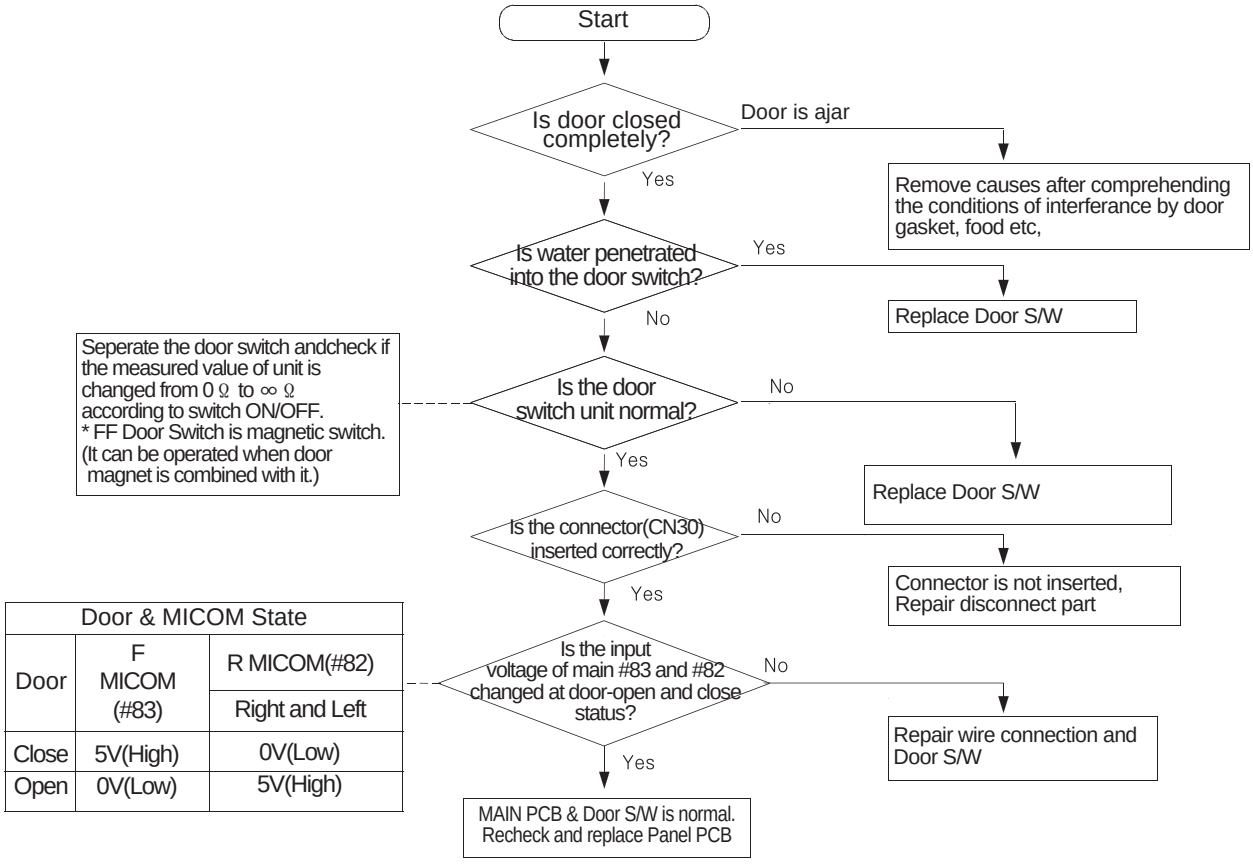
Common PCB Ground
REG1 Heater Sink

SPM FREEWHEELING DIODE VOLTAGE VALUE

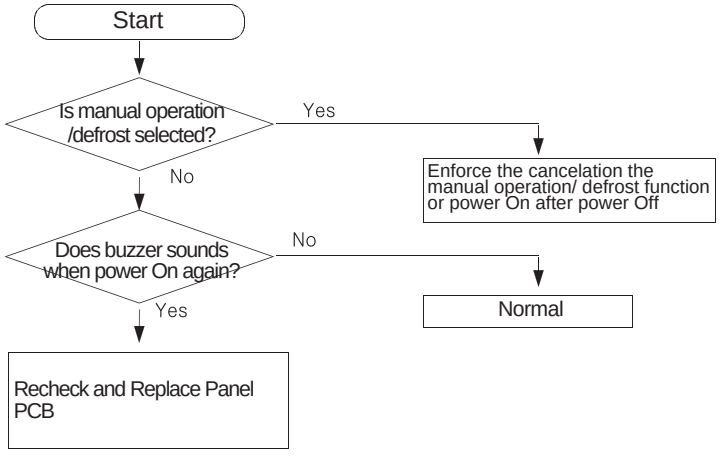


4-2-9. When alarm sounds continuously without stop(related with buzzer sound)

① If 'ding-dong'sound continuously

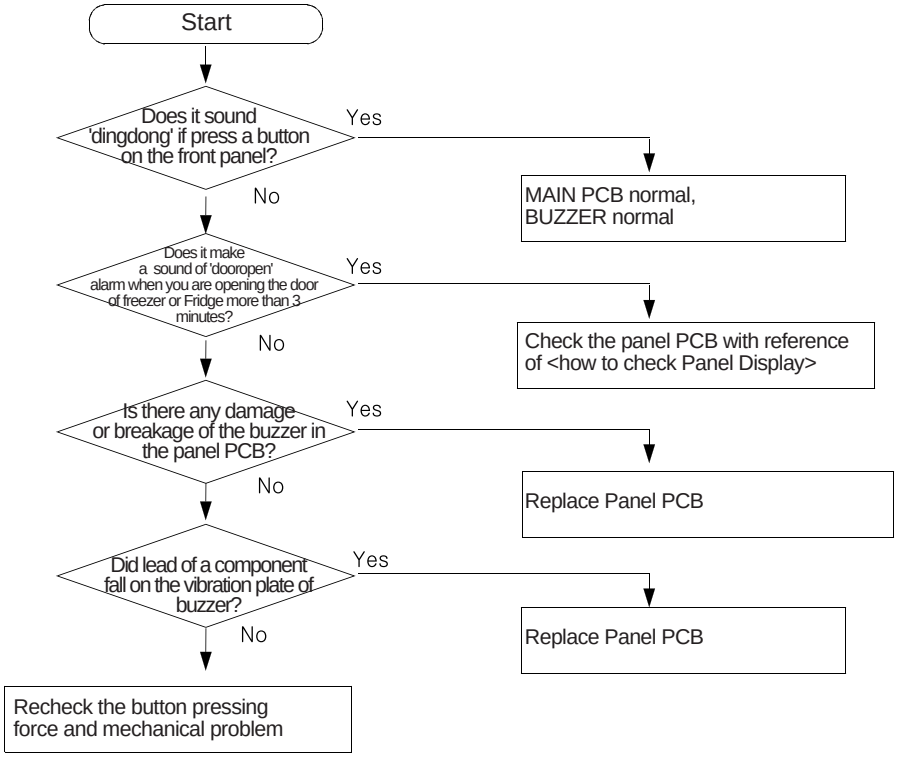


② If 'beep-beep' sounds continuously



③ If buzzer does not sound

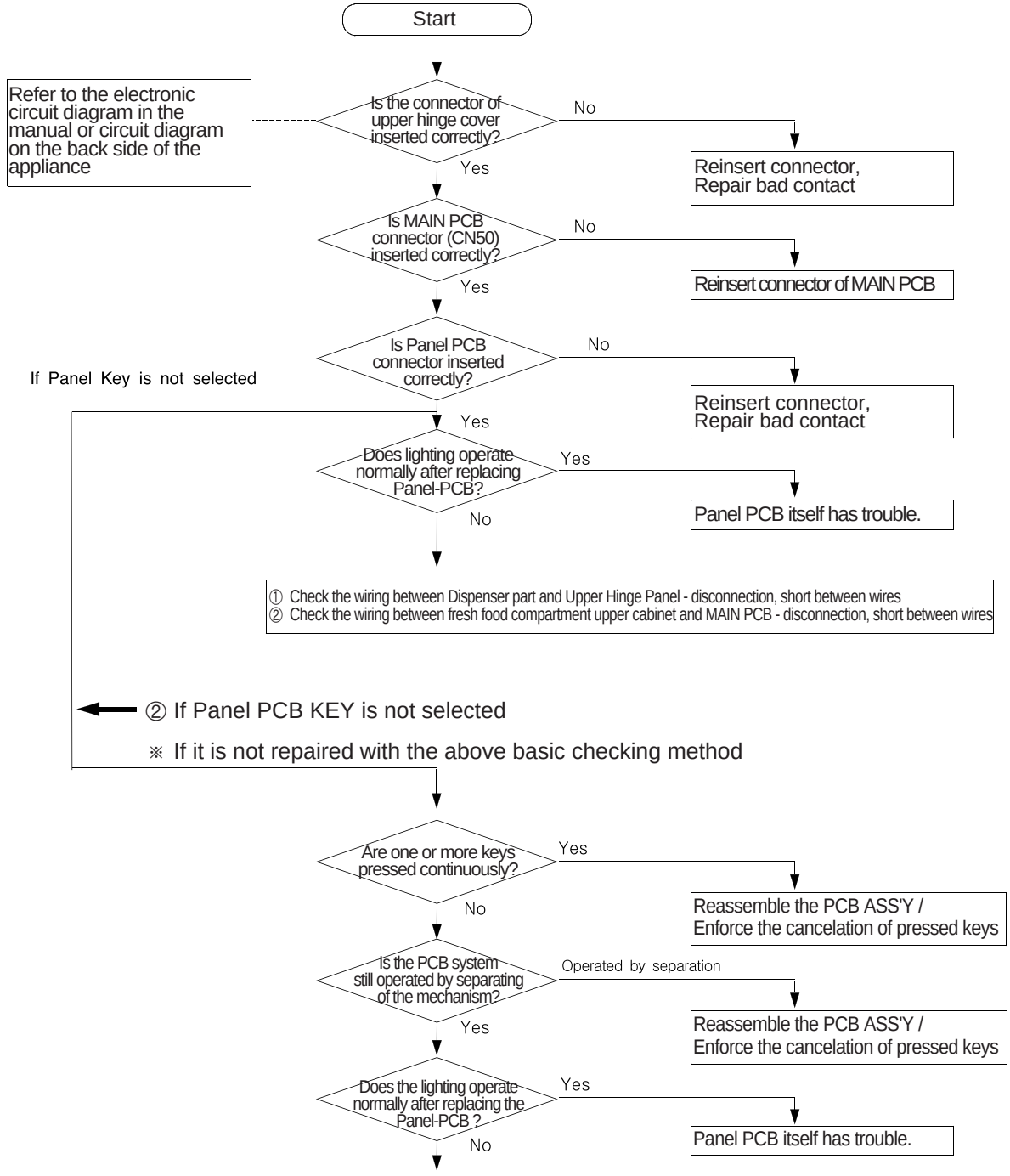
Buzzer is installed on the panel PCB in this model.
If buzzer does not sound even though the button is pressed, manual operation is started and door is opened, it should separate panel PCB and check the breakage of buzzer and bad soldering.
It is very hard to repair the panel PCB because it consists of SMD assemblies.
It is recommended to replace PCB assembly when the failure associated with panel is occurred except the minor error such as switch pressing error, surface peeling off and so on.



4-2-10. If Panel PCB does not work normally

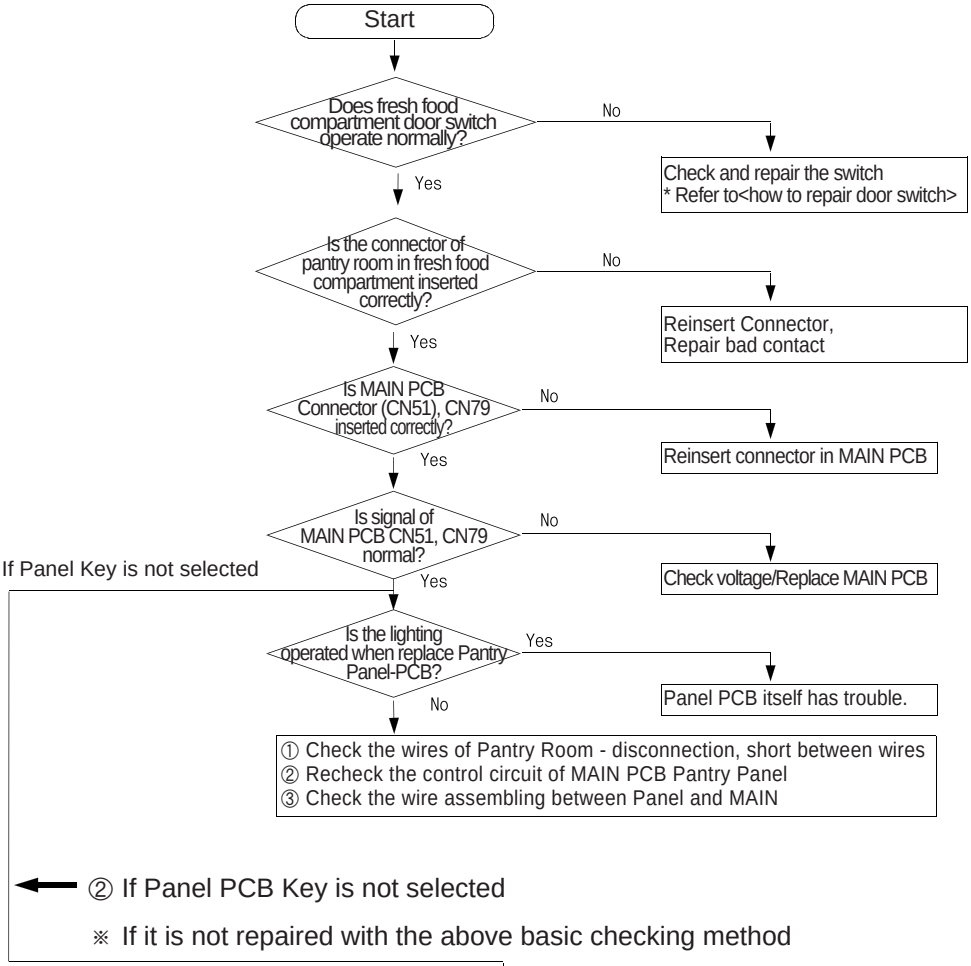
① When lighting of Panel PCB is disabled or only some LED Lamp are disabled

Be careful to repair because display of this model is installed in the MICOM of internal PCB.
It is recommended to replace PCB MAIN after checking except specified solder touch.



4-2-11. If Pantry Panel PCB is not working normally

You should check the display after door opening because the display of this model operates only when the fresh food compartment door is opened.



Typical PCB Ground
REG1 Heater Sink

← ② If Panel PCB Key is not selected

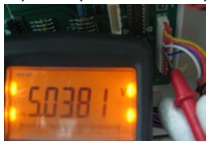
※ If it is not repaired with the above basic checking method

☞ Checking method of voltage Based on PCB typical Ground REG1 Heater Sink

1) Key voltage ; CN51#6"(Purple)

1) select(operating) (0V)

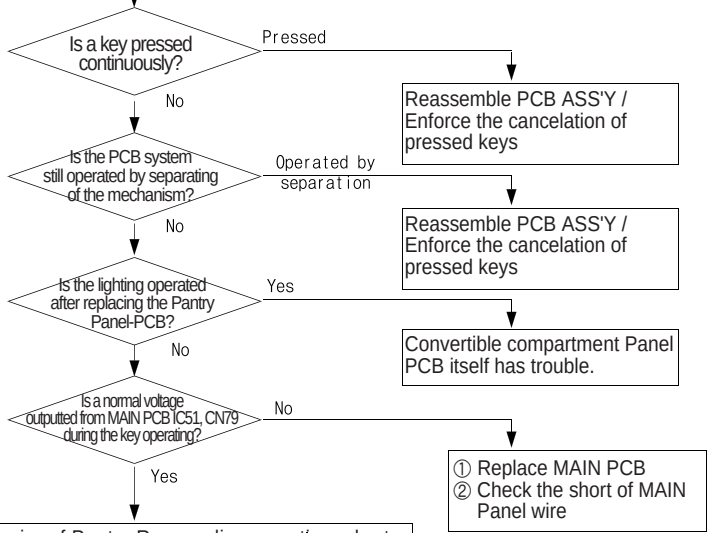
2) normal(about5.0V ±0.5V)



2) LED part voltage ; CN51-"1"(Yellow), "2"(Pink),"3"(Orange) → Voltage of CN51 is same as IC50 #14,#13,#12 voltage.

- Display On (0.7V±0.5V)

- Display Off (11V±1V)

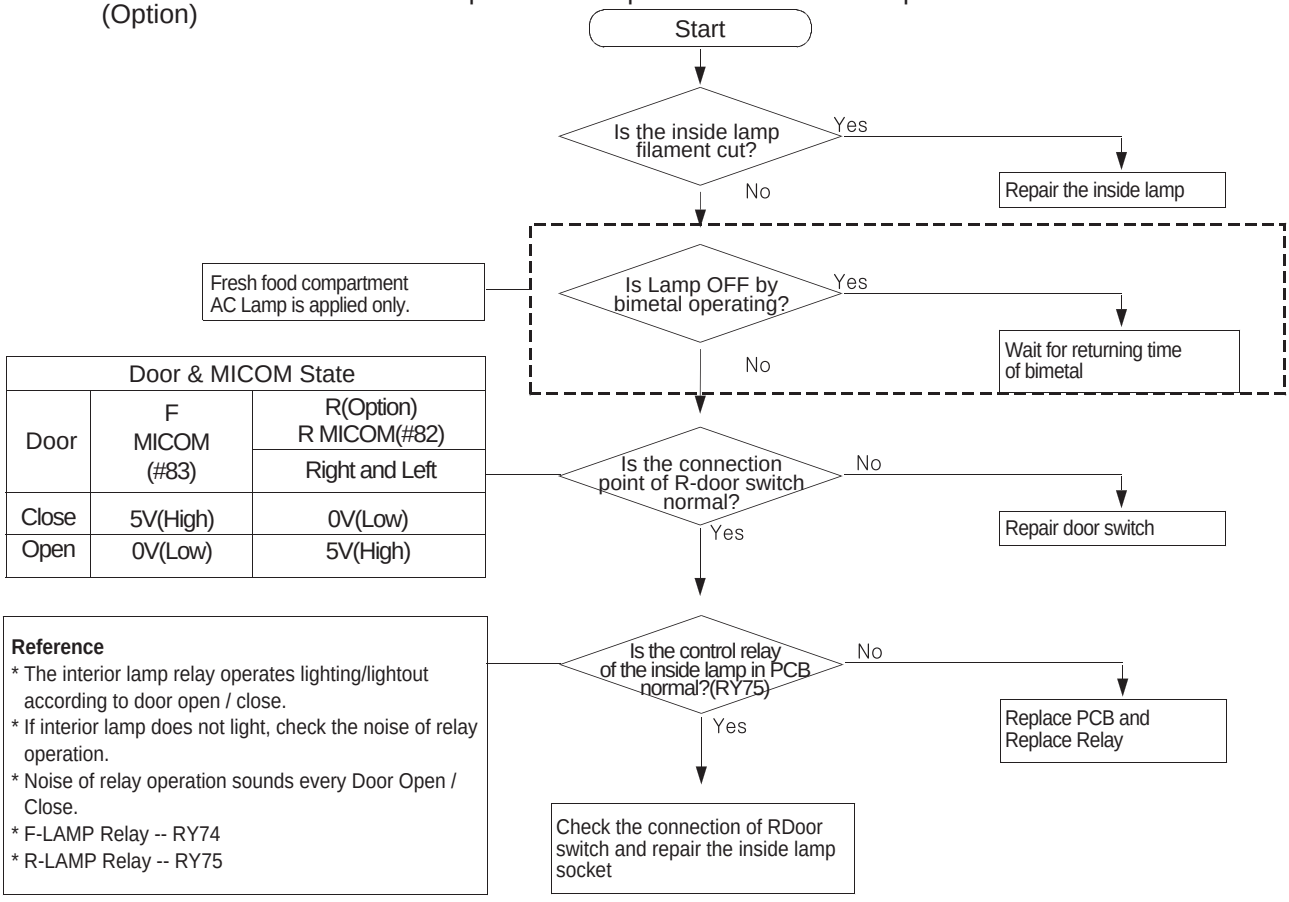


4-2-12. When refrigerator ROOM Lamp does not light up

1. When you replace the lamp of freezer, please power OFF to avoid an electric shock.
2. Please keep in mind you could get burnt by the excessive heating of an incandescent light bulb.
3. Bimetal is installed in the refrigerator LAMP. Check that if LAMP may be turned OFF by bimetal.

1) AC Lamp (Option)

※ We only explaine about Fresh Food compartment in this page.
Because it is possible to repair the other room lamps with the same method.



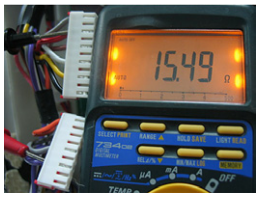
Door & MICOM State		
Door	F MICOM (#83)	R(Option) R MICOM(#82)
		Right and Left
Close	5V(High)	0V(Low)
Open	0V(Low)	5V(High)

Reference
* The interior lamp relay operates lighting/lightout according to door open / close.
* If interior lamp does not light, check the noise of relay operation.
* Noise of relay operation sounds every Door Open / Close.
* F-LAMP Relay -- RY74
* R-LAMP Relay -- RY75

Reference
If the door is opened, the contact of door switch will be opened and MICOM will get applied 5V to finally sense Open.
If 5V has been sensed over 3 minutes afterwards, Door-Open alarm will sound 'Ding-Dong' for 10 seconds in a one minutes cycle. For that reason, if the door switch has failure, the refrigerator can make a "Ding-Dong" sound with oneminute cycle. Please note the step for its service.

☞ When measure lamp resistance to the Wire
→ Resistance can be changed by Lamp input voltage. (Actual measurement is below, it can be changed by performance)

Wire color changed from the following picture



☞ Fresh food compartment lamp
CN70#9(Red) ↔ CN71#1 (Blue) ; 10Ohm±5%
Lamp ; 60W + 60W

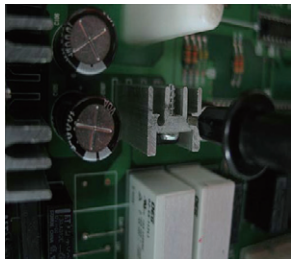
☞ Freezer compartment lamp
CN70#9(Red) ↔ CN71#3 (Gray) ; 15Ohm±5%
Lamp ; 60W

☞ Checking method of Door Switch voltage
- Measuring voltage of CN30#2(Purple), CN30#1(black) and REG1, HEAT SINK from PCB typical Ground part
→ See the R DOOR Switch at the following picture.

CLOSE

OPEN

Typical PCB Ground REG1 Heater Sink



1) LED Lamp (Option)

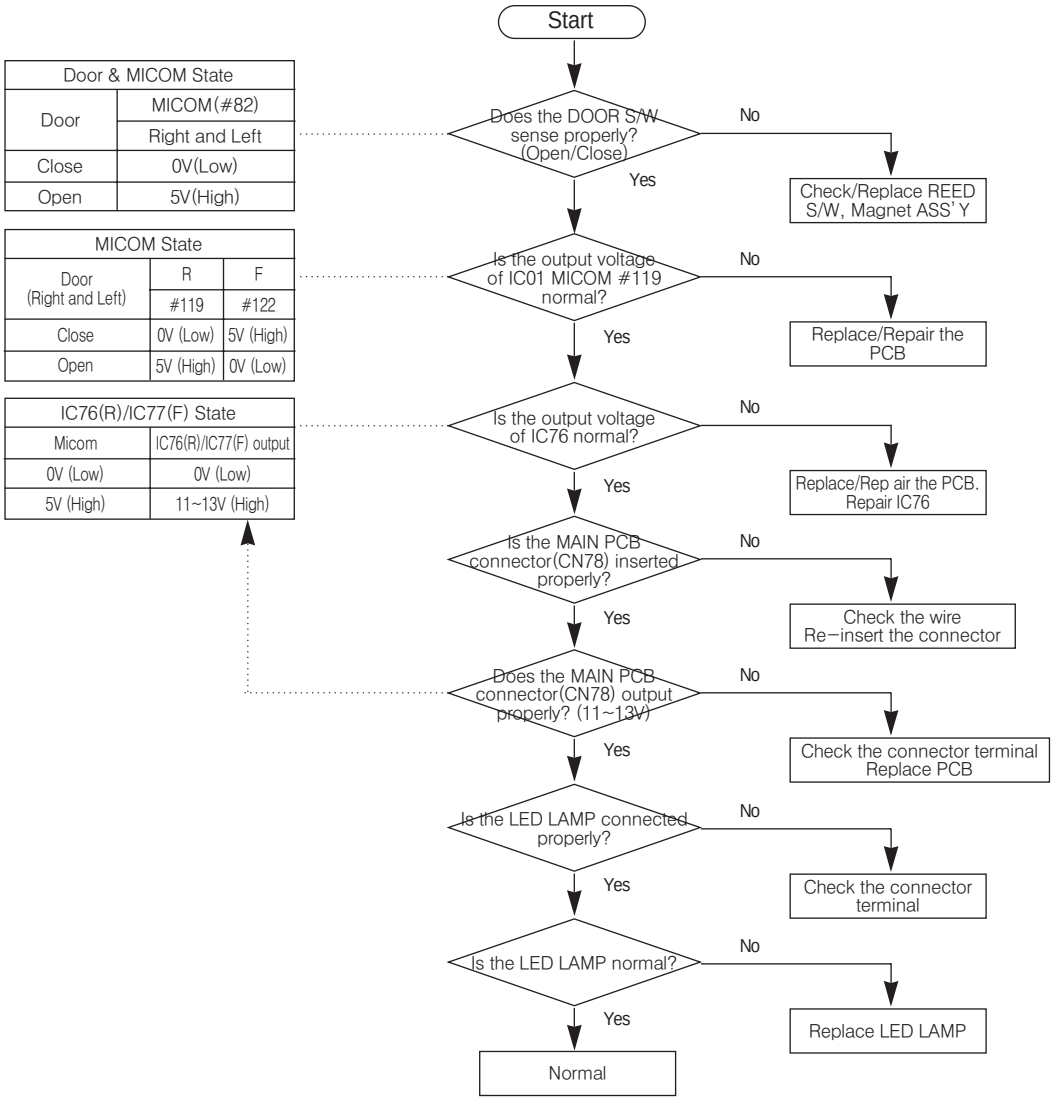
When controlling the regrigerator light with Regulator(12V) : LED LAMP
→ Applying only to the FF compartment.

* If the Vegetable Lamp does not work properly, check the FF compartment LED Lamp because it is connected with the FF compartment LED Lamp in parallel. Refer to the circuit diagram to repair.

Door & MICOM State	
Door	MICOM(#82)
	Right and Left
Close	0V(Low)
Open	5V(High)

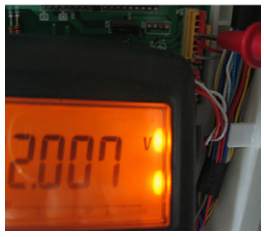
MICOM State		
Door (Right and Left)	R	F
	#119	#122
Close	0V (Low)	5V (High)
Open	5V (High)	0V (Low)

IC76(R)/IC77(F) State	
Micom	IC76(R)/IC77(F) output
0V (Low)	0V (Low)
5V (High)	11~13V (High)

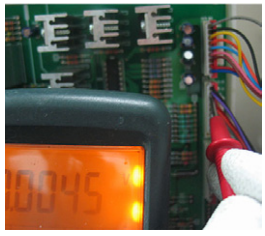


☞ Output Voltage Checking Method
– Common Ground REG1 Heater Sink in PCB and
1) Measuring IC76 voltage(CN78–"4"(Red) / R ROOM LED)
Measuring IC77 voltage(CN78–"1"(Black) / F ROOM LED)

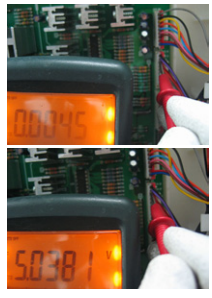
LED Lamp ON



LED Lamp OFF



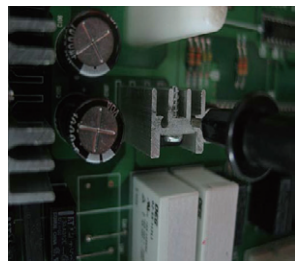
☞ Door Switch voltage Checking Method
- Measuring common Ground REG1 Heater Sink in PCB and CN30-"2"(Purple) (R Door Switch)



Close

Open

Typical PCB Ground REG1 Heater Sink

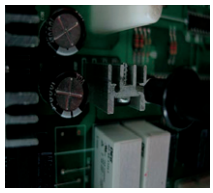


4-2-13. If ICE Water is not supplied

1. Please shut the water supplying prior to repair.
2. Power is applied to the one end of wires. Be careful when disassembling not to get an electric shock.

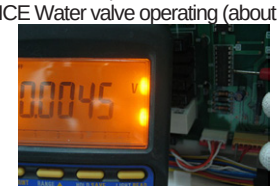
1) Fridge Ice Water Valve

Typical PCB Ground REG1 Heater Sink



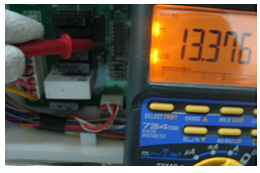
☞ Checking method of voltage Based on PCB typical Ground REG1 Heater Sink

1) Check the voltage of IC73#4(same voltage as IC01 #54)
- ICE Water valve operating (about 5V±0.5V)



Based on PCB typical Ground REG1 Heater Sink

2) IC73 #15 voltage
- ICE Water valve Waiting (about 13V±0.8V)
- ICE Water valve operating (about 0.7V±0.5V)

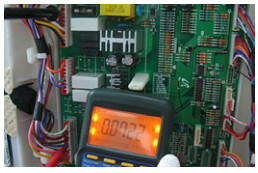


3) Check the voltage of Fridge Ice Water Valve operating(AC voltage)

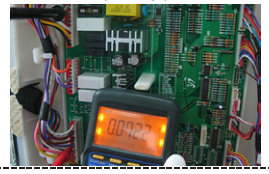
=> For checking the Relay RY78 operating.

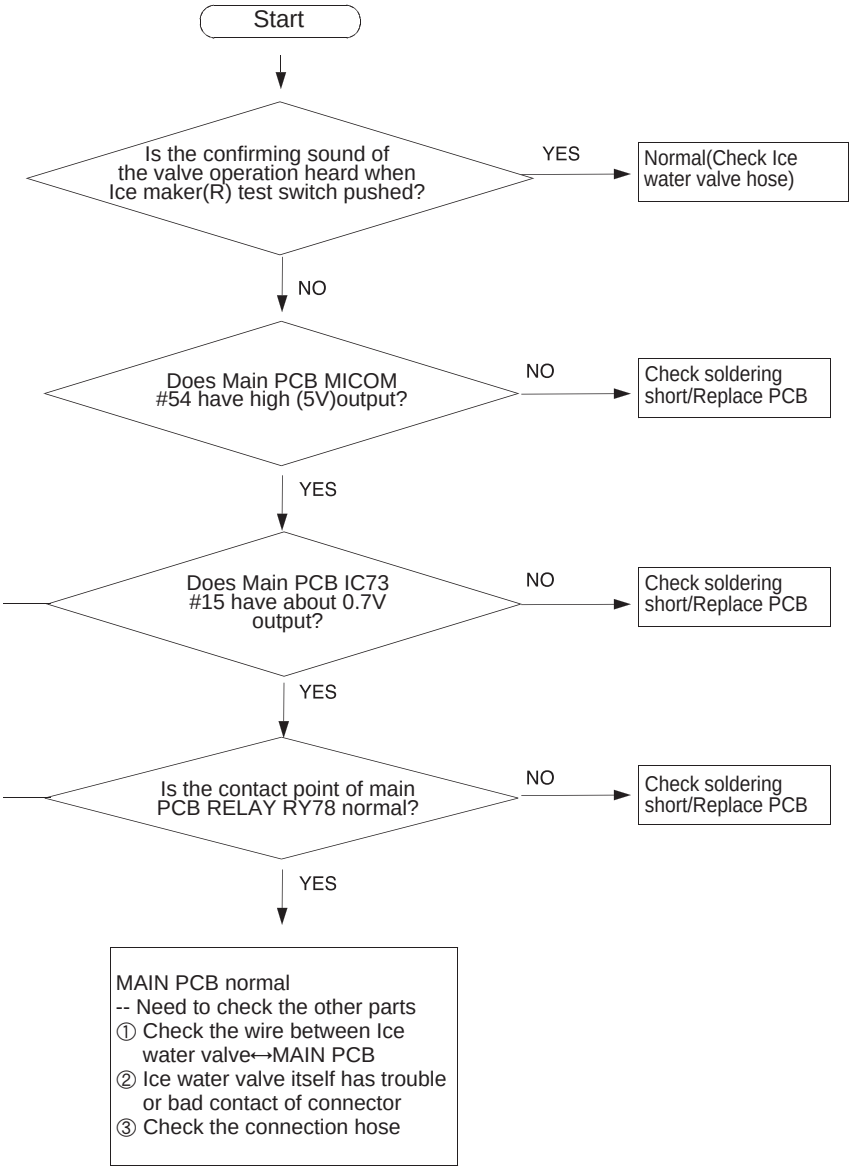
CN73 and CN74 combined and use same connector(13p)

CN70#9(Red) ↔ 13P#7(Purple)
- ICE Water valve waiting (about AC 0V)



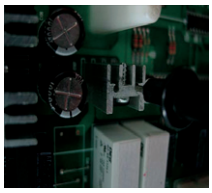
- ICE Water valve operating (about AC 115V ± 20%)





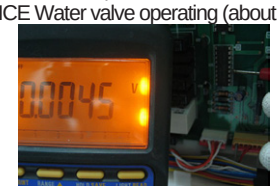
2) Freeze Ice Water valve(RFG238 MODEL)

Typical PCB Ground REG1 Heater Sink



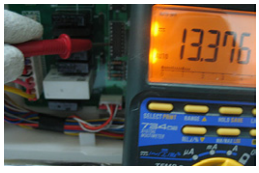
☞ Checking method of voltage Based on PCB typical Ground REG1 Heater Sink

1) Check the voltage of IC72#1(same voltage as IC01#58)
- ICE Water valve operating (about 5V±0.5V)



Based on PCB typical Ground REG1 Heater Sink

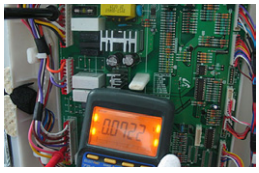
2) IC72 #18 voltage
- ICE Water valve Waiting (about 13V±0.8V)
- ICE Water valve operating (about 0.7V±0.5V)



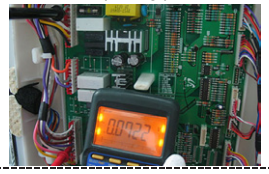
3) Check the voltage of Fridge Ice Water Valve operating(AC voltage)

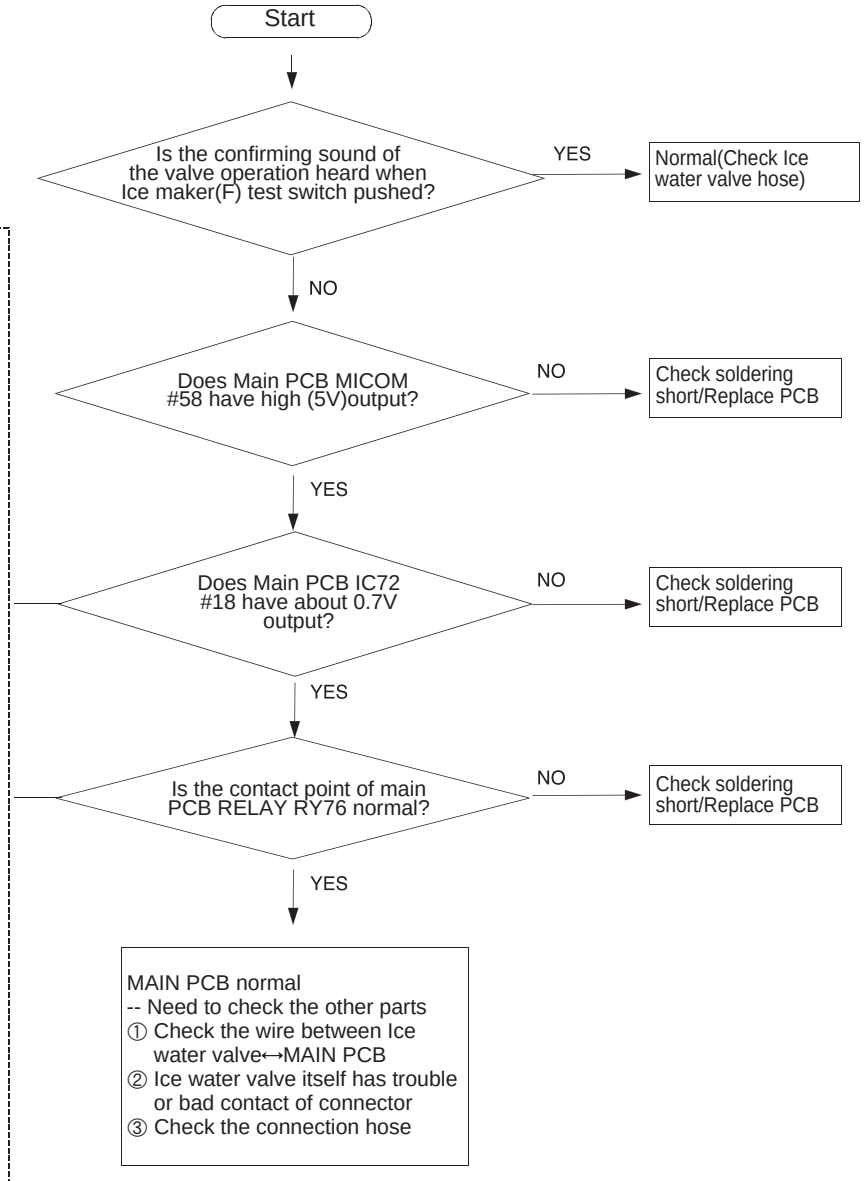
=> For checking the Relay RY76

CN70-"9"(Red) ↔ CN72-"5"(Brown)
- ICE Water valve waiting (about AC 0V)

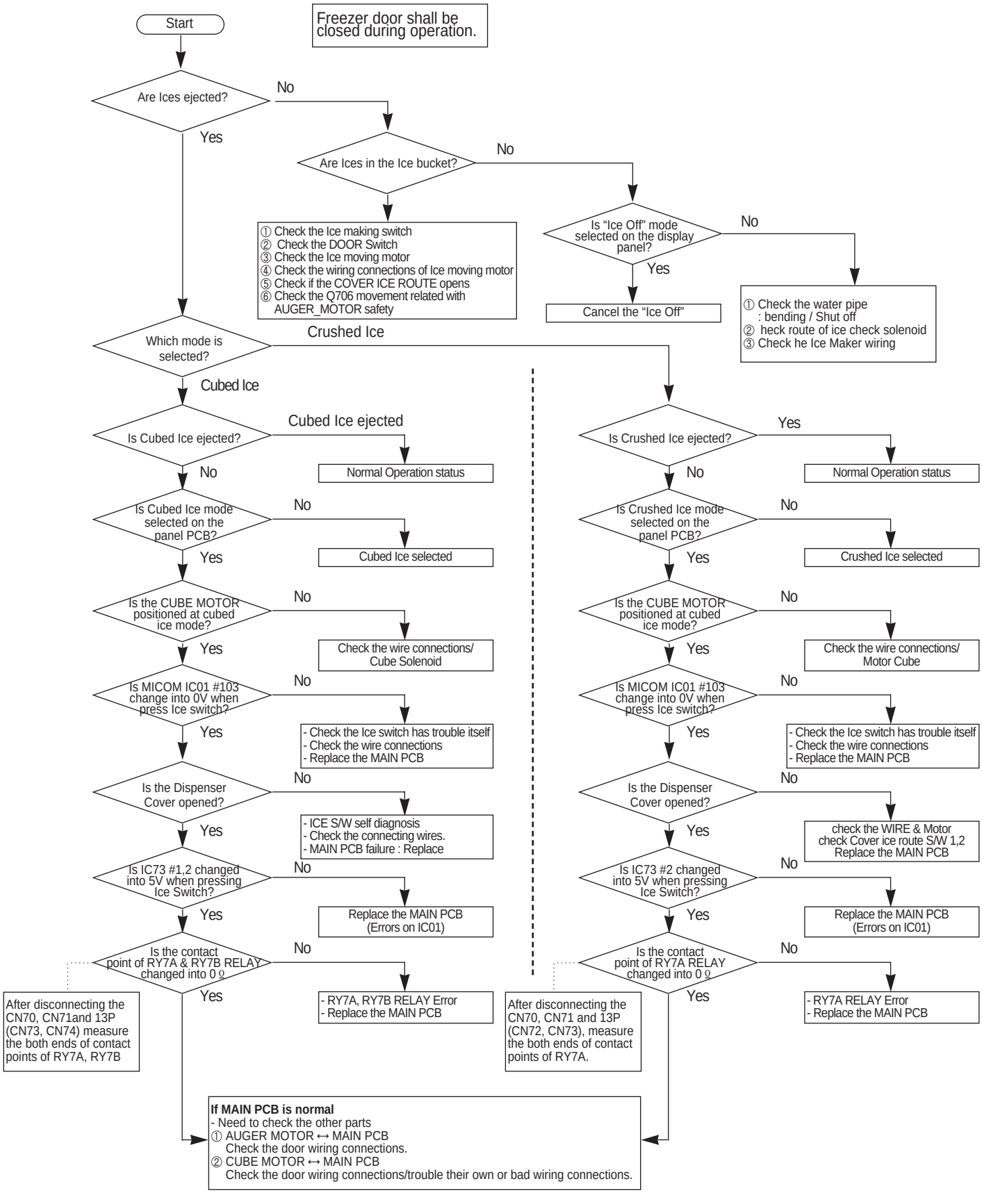


- ICE Water valve operating (about AC 115V ± 20%)





4-2-14. If Cubed or Crushed Ice is not supplied



4-2-15. If Cover Ice Route Motor(Geard Motor) is not working normally

Caution
1. When replacing the Cover Ice Motor, pull out the plug to avoid an electric shock.
2. Be careful! When disassemble the Cover Ice Motor, spring can jumped out and may cause personal injury.
3. Motor will rotate continuously when the Motor Switch is not sensed.

☞ Checking Mehod of Cover Ice Route Motor Resistance
(Make sure to work after Power Off)
The Resistance is variable according to the input voltage.
CN73 and CN74 combined and use same connector(13P)
CN70#9(RED) ↔ 13P#9(Blue)
** 0Ω : Short trouble / ∞Ω : Open trouble

Start

Does GEARED MOTOR work properly?
- No → Replace the MOTOR
- Yes ↓

Is Cubed or Crushed Ice mode selected on the LED PANEL?
- No → Cubed or Crushed Ice is selected on the LED PANEL PCB
- Yes ↓

Is the DISPENSER switch selected?
- No → Select the DISPENSER switch
- Yes ↓

Does the wiring at the both sides of motor connected properly?
- No → Check the WIRE
- Yes ↓

When the MOTOR rotates.

Is the AC input voltage applied to the both ends of the motor?
- Yes → Check the MOTOR/Check any interference on MOTOR rotation
- No ↓

① CN73 and CN74 combined and use same connector(13P).
Check 13P-"9" Connector / Re-connect
② Check the short/open for the SSR75 of Cover Ice Motor on Main PCB.
③ Check the resistance of parallel Connector 13P-"9", CN70-"9".
(Definitely plug out prior to repair)

Is the sensing SWITCH connection normal?
- No → Check/Repair the Housing connector
- Yes ↓

Is the switch pressed area normal when motor rotates?
- No → Check/Repair the Motor Rotation pressing area
- Yes ↓

Are the voltage REG1 Heater Sink and CN50-"9", "10" normal?
- Yes → Normal
- No ↓

Operating Condition of Dispenser Open/Close
CN50 - Switch 1,2 Operating

	Close	ing	Open
Ice Route Switch 1 CN50 - "9" (Purple)	0V	5V	0V
Ice Route Switch 2 CN50 - "10" (White)	0V	5V	0V

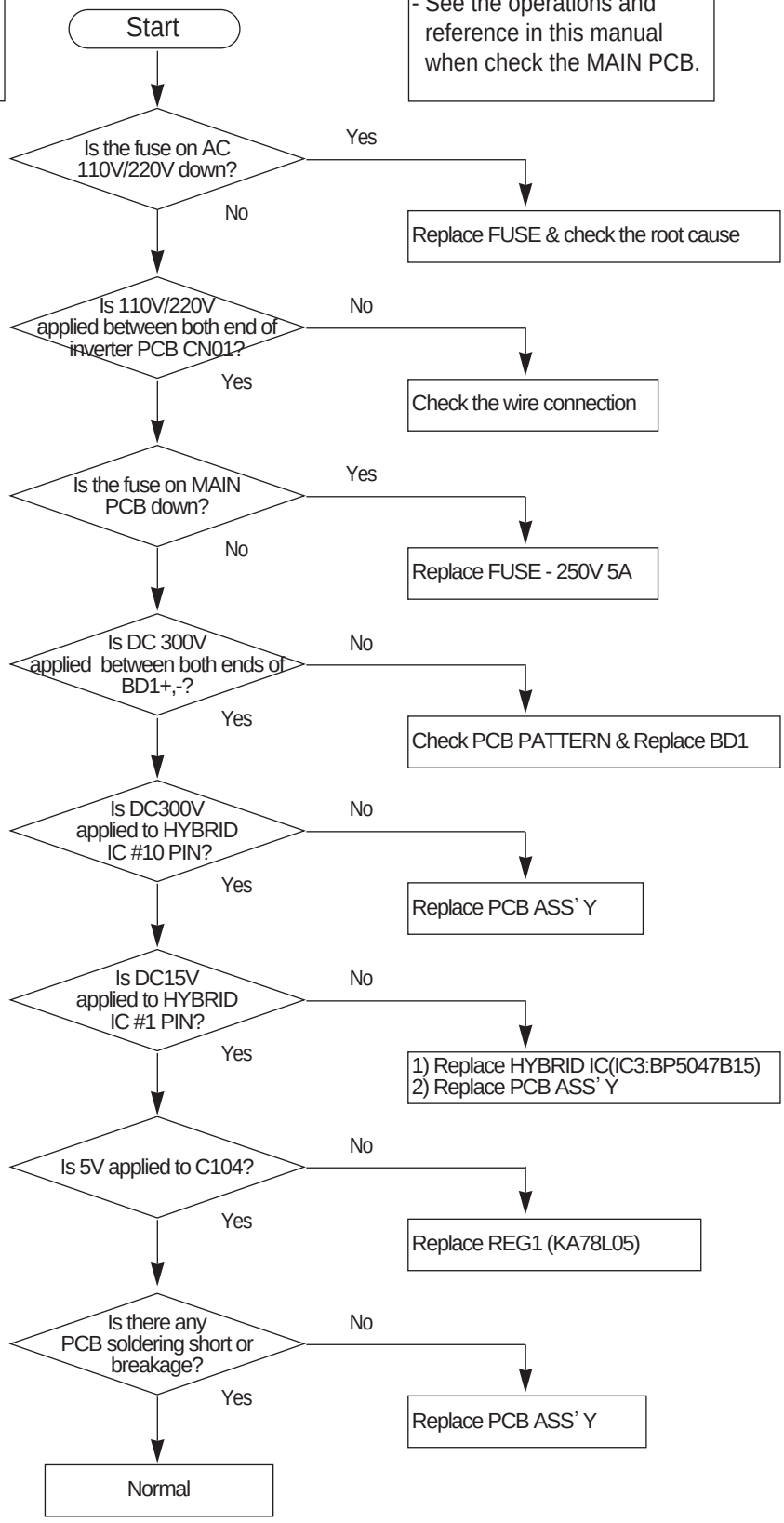
① Main PCB - Check the wire OPEN/SHORT between the Cover Ice Motor Rotation sensing switches.
② Check the Short of Cover Ice Motor Control Circuit SSR75 in the MAIN PCB.
③ Replace the MAIN PCB or the Dispenser Cover Motor.

4-2-16. If Inverter PCB Power is not supplied

Caution

At the INVERTER PCB Power, AC 110V/220V power and over DC 300V of high-voltage are applied. Please take care of yourself when repair and measure.

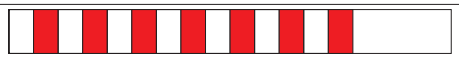
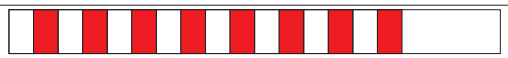
- See the operations and reference in this manual when check the MAIN PCB.



4-2-17. LED blinking frequency depending on protecting functions

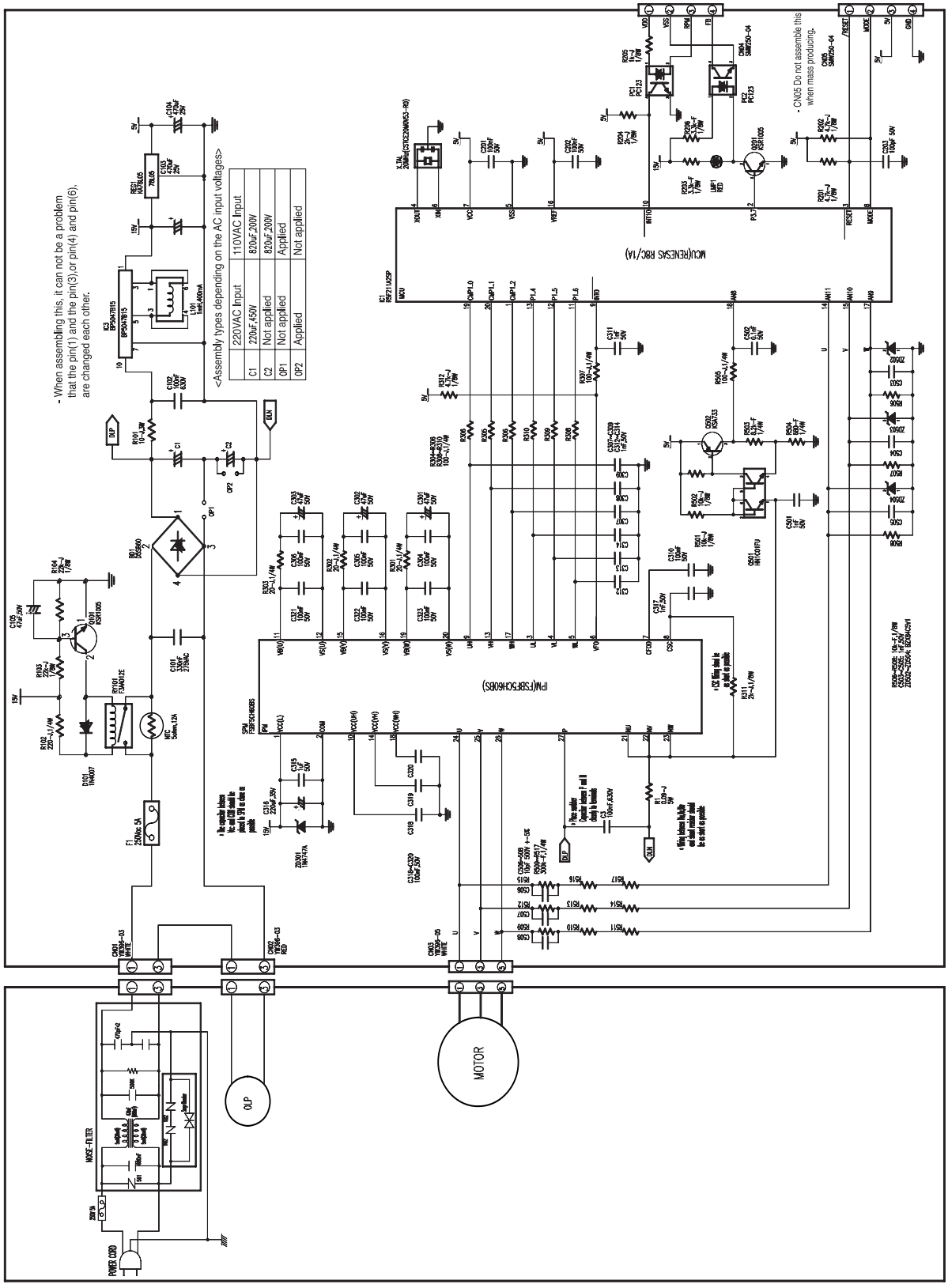
If Failure Condition is detected during compressor is operating, immediately stop Compressor operating and stand by 5 minutes. During this 5 minutes, RPM command signal is not available. It means, even if available RPM command signal is applied to the compressor, it does not work and keep standing by.

Blinking time is 1 second and dwell time is 2 seconds.

Protecting Functions	LED Blinking Frequency	Remarks
Starting Failure		
SPM Fault		
Detecting Positon Failure		
Motor locked		
Low Voltage		
Over Voltage		
ROM		
RAM		
Stack		
Reserved		

LED blinking frequency depending on protecting functions

INVERTER PCB Circuit Diagram



5 . EXPLODED VIEW& PARTS LIST

5-1) FREEZER 98

5-2) REFRIGERATOR 102

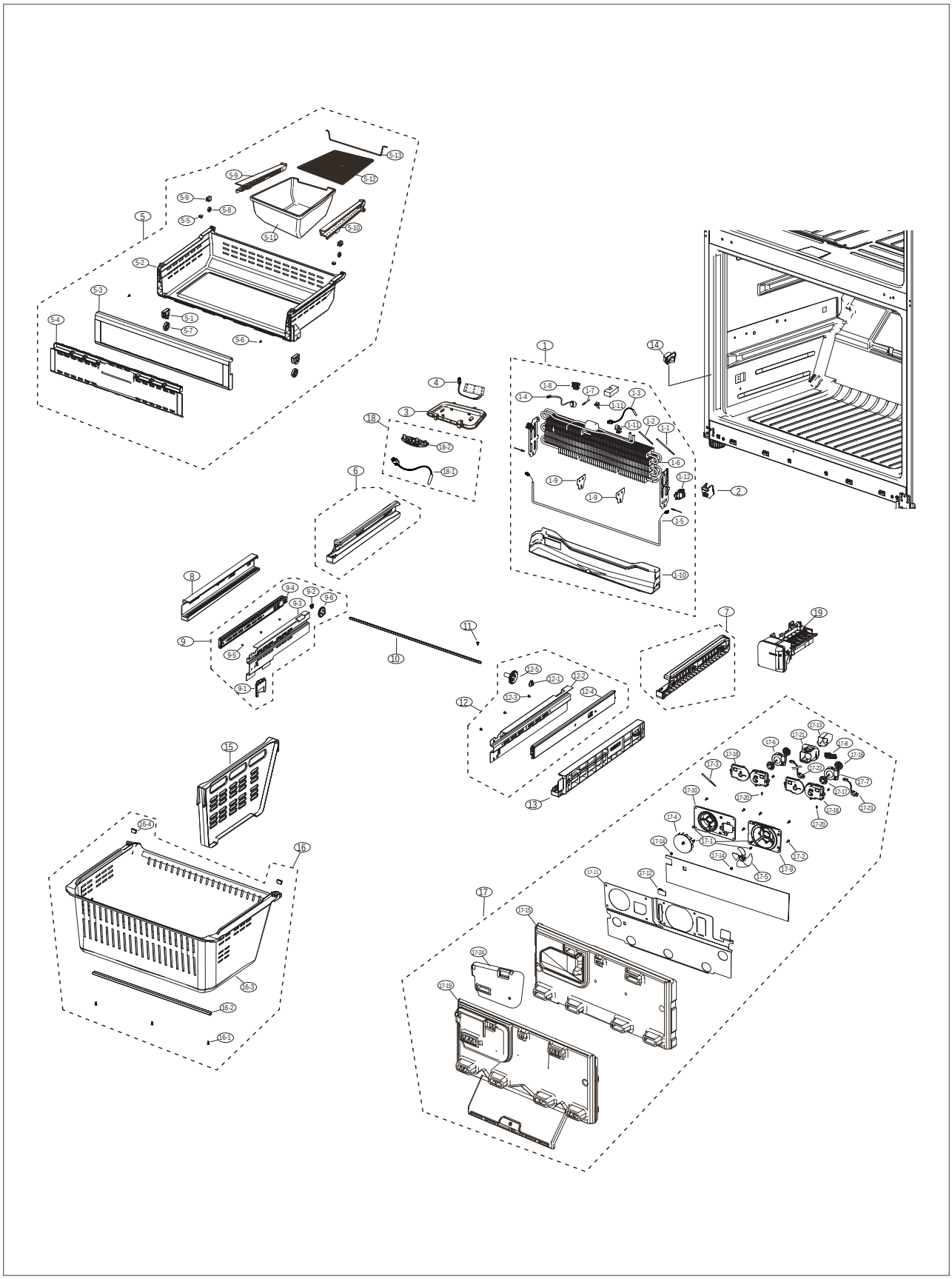
5-3) CABINET 108

5-4) DISASSEMBLY OF FREEZER DOOR 112

5-5) DISASSEMBLY OF REFRIGERATOR DOOR LEFT 114

5-6) DISASSEMBLY OF REFRIGERATOR DOOR RIGHT 116

5-1) Freezer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EXPLODED VIEW& PARTS LIST

■ Parts List of Freezer

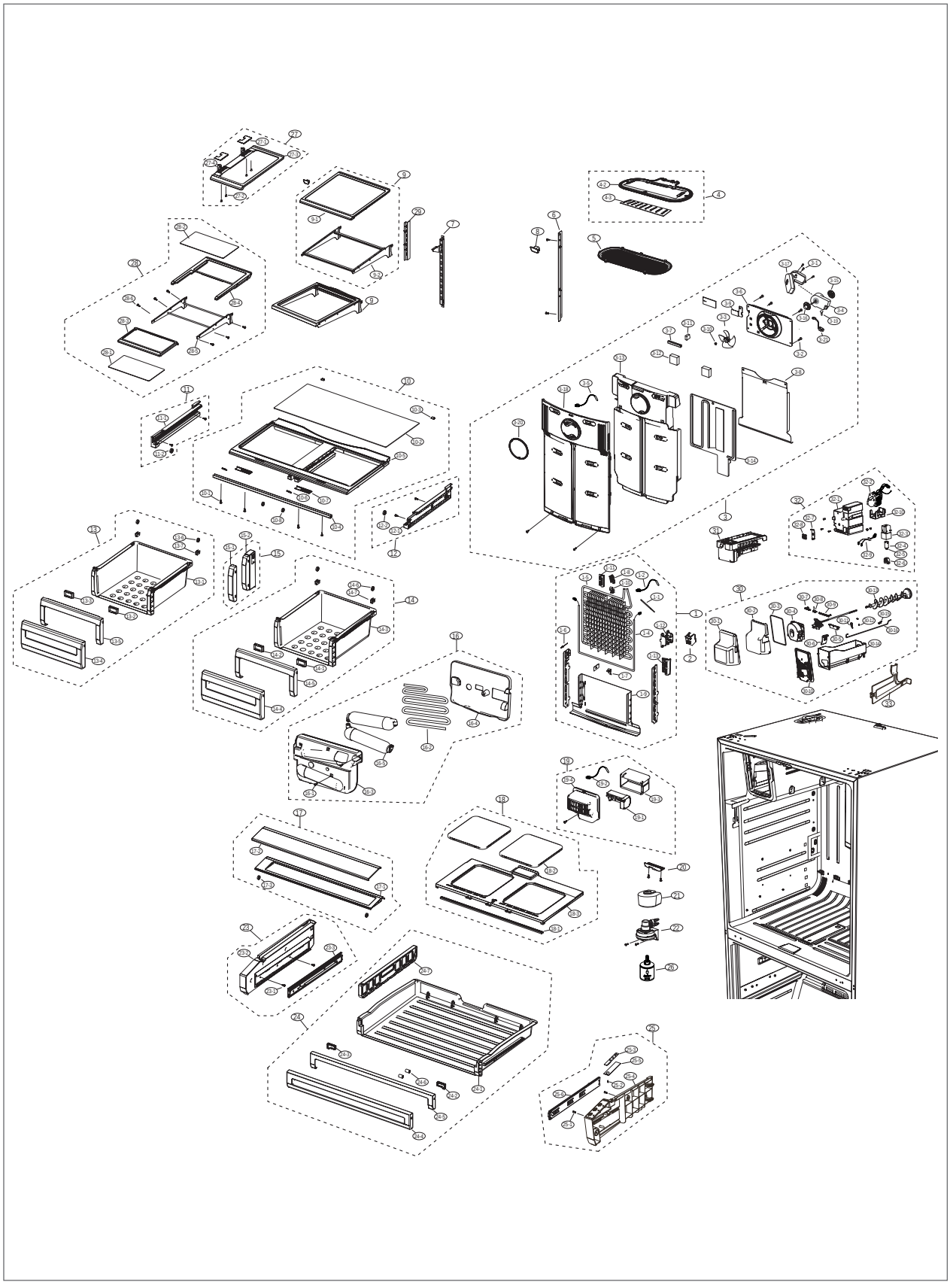
NO	CODE-NO	PART NAME	SPEC	QUANTITY	REMARK
1	DA96-00462B	ASSY EVAP-FRE	AW-PJT('08),115V/240W	1	
1-1	6501-000123	CABLE TIE	DACT-140,-,W3.6,L146,NTR,NYLON66	1	
1-2	6501-000124	CABLE TIE	DA-200,T1.2,W4.8,L203,NTR,NYLON66	2	
1-3	DA32-00006S	SENSOR TEMP-R-DEF	PX-41C, 502AT,AW-PJT,-40~110°…,5V,-,-,R-DEF SENSOR,YEL,400MM	1	
1-4	DA47-00243B	THERMO BIMETAL-PROTECTOR	AW-PJT(F),BT-121-M, PW-5M1N,125 / 250V,10 / 5A,60°…,40°…,-,- ,100 ㏁,-,-	1	
1-5	DA47-00244A	HEATER-METAL SHEATH	-,AW-PJT,-,240W,-,115V,55.1 Ω,-,-,F-ROOM	1	
1-6	DA59-00361A	EVAP-FRE ICE	-,PIN,-,-,115V,-,-,-,AW-PJT,-	1	
1-7	DA60-90005A	RIVET-AVEX	AL,D3.2,L9.83,-,-	3	
1-8	DA61-02901A	FIXER-SENSOR EVAP	CORE-PJT,PP,-,NTR,-	1	
1-9	DA61-03644A	PLATE-EVAP HEATER	AW-PJT,AL,T0.7,-,-,-,-	1	
1-10	DA61-04225A	PLATE-DRAIN FRE	AW2-PJT,GALVANUME,T0.3,-,-,-,-	1	
1-11	DA61-06013B	FIXER-WIRE	AW3-PJT,PP,NTR	2	
1-12	DA61-05689A	FIXER-HEATER FRE	AW2,PBT,NTR,V0	2	
2	DA63-02902B	COVER-FIXER HOUSING V	NEXT-PJT,GALVA,T0.3,W31,L42,-,-,-,-	2	
3	DA63-04955B	COVER-LAMP FRE	NW2-FDR,GPPS,NTR	1	
4	DA96-00398G	ASSY-LAMP LED	NW2 FDR,3chip 6EA	1	
5	DA97-07534A	ASSY TRAY-FRE UPP	AW2 CD,-,-,-,COOL WHITE,-	1	
5-1	DA61-04154A	FIXER-ROLLER TRAY FRE UPP	AW-PJT,POM,1.8,NATURAL,-	2	
5-2	DA63-04939A	TRAY-FRE UPP	AW2 CD,ABS,-,-,-,-,COOL WHITE(SC-02740R),-	1	
5-3	DA63-04252B	COVER-TRAY FRE UPP A	AW2,ABS,-,-,-,-,-,COOL WHITE,-	1	
5-4	DA63-04253A	COVER-TRAY FRE UPP B	AW2,GPPS,-,-,-,-,-,-,-	1	
5-5	DA63-40167A	GROMMET-COVER CHIL	-,SILICON,T3.0,-,L16,-,-,BLACK,-	2	
5-6	DA66-00554A	ROLLER-TRAY FRE UPP	AW-PJT,POM,42.2,-,NATURAL,-,PVC COATING	2	
5-7	DA66-10104A	ROLLER-FRE	POM,-,-,D22,-,-,	2	
5-8	DA71-20145A	FIXER-ROLLER	-,PA,–,-	2	
5-9	DA61-05185A	GUIDE-TRAY FRE UPP R	AW2 CD,PA+ABS,COOL WHITE(SC-02740R)	1	
5-10	DA61-05186A	GUIDE-TRAY FRE UPP L	AW2 CD,PA+ABS,COOL WHITE(SC-02740R)	1	
5-11	DA61-05187A	CASE-ICE CUBE (RFG238)	AW2 CD,PP,-,-,-,COOL WHITE(SC-02740R),-	1	
5-12	DA63-05155A	TRAY-CASE ICE CUBE (RFG238)	AW2 CD,LDPE,NTR	1	
5-13	DA66-00674A	SHAFT-TRAY FRE UPP	AW2 CD,SM25C,-,-,WHITE,-,-	1	
6	DA61-05251A	RAIL-FRE UPP L	AW2 CD,ABS,-,-,389.9,COOL WHITE,-	1	
7	DA61-05238A	RAIL-FRE UPP R	AW2 CD,ABS,-,75.4,389,COOL WHITE,-	1	
8	DA63-04942A	COVER-RAIL LOW L	AW2 CD,ABS,-,-,-,-,-,COOL WHITE(SC-02740R),-	1	
9	DA97-07536A	ASSY RAIL-SLIDE LOW L	AW2 CD-PJT,-,-,-,-,STS430	1	
9-1	DA34-00047A	SWITCH PRESSURE	AW-PJT,-,-,-,-,PP,COOL WHITE	1	
9-2	DA61-03154A	FIXER-GEAR	AW-PJT,POM,-,NTR,-	1	
9-3	DA61-05189A	HANGER-RAIL LOW L	AW2 CD,SECC1,T1.6,COOL WHITE(SC-02470T),-,-,-	1	
9-4	DA61-05231A	RAIL-SLIDE LOW L	AW2 CD,STS430,-,-,-,-,-	1	
9-5	DA61-03285A	HANGER-RIVET	AW-PJT,BSW2,-,-,-,-,-	3	
9-6	DA66-00436A	GEAR-L	AW-PJT,POM,-,-,-,NTR,-,-,-	1	
10	DA66-00437B	SHAFT-GEAR	AW2,SM25C,715.1,-,-,-,BLACK Electro-deposition Coating	1	
11	DA67-00859C	CAP-DOOR HANDLE	CORE,ABS,-,-,-,INOX,SC-06034R	1	
12	DA97-07535A	ASSY RAIL-SLIDE LOW R	AW2 CD-PJT,-,-,-,-,STS430	1	
12-1	DA61-03154A	FIXER-GEAR	AW-PJT,POM,-,NTR,-	1	
12-2	DA61-05190A	HANGER-RAIL LOW R	AW2 CD,SECC1,T1.6,COOL WHITE(SC-024070T),-,-,-	1	
12-3	DA61-03285A	HANGER-RIVET	AW-PJT,BSW2,-,-,-,-,-	3	
12-4	DA61-05230A	RAIL-SLIDE LOW R	AW2 CD,STS430,-,-,-,-,-	1	
12-5	DA66-00435A	GEAR-R	AW-PJT,POM,-,-,-,NTR,-,-,-	1	
13	DA63-04941A	COVER-RAIL LOW R	AW2 CD,ABS,-,-,-,-,-,COOL WHITE(SC-02740R),-	1	
14	DA34-10120E	SWITCH DOOR-F	-,slide,-,-,250V,-,0.5A,-,-,-,-,-,-,cool white,-,-,-,-	1	
15	DA61-05188A	GUIDE-DRAWER BOX	AW2 CD,PP,-,-,-,COOL WHITE(SC-02740R),-	1	
16	DA97-07533A	ASSY TRAY-DRAWER BOX	AW2 CD,-,-,-,COOL WHITE,-	1	

■ **Parts List of Freezer**

NO	CODE-NO	PART NAME	SPEC	QUANTITY	REMARK
16-1	6002-000213	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC(WHT),SWRCH18A,-	3	
16-2	DA61-03160A	REINF-DRAWER BOX	AW-PJT,SHP1,T2.0,BLACK	1	
16-3	DA63-04940A	TRAY-DRAWER BOX	AW2 CD,PP,-,-,-,-,COOL WHITE(SC-02740R),-	1	
16-4	DA63-04313A	GROMMET-TRAY DRAWER BOX	AW2,SILICON,-,-,-,-,-,WHT,-	2	PC
17	DA97-07906A	ASSY COVER EVAP-FRE ICE (RFG238)	AW2-CD,TWIN I/M	1	
17	DA97-07818C	ASSY COVER-EVAP FRE ICE (RFG237)	AW2-CD	1	
17-1	6002-000213	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC(WHT),SWRCH18A,-	6	
17-2	6002-000215	SCREW-TAPPING	TH,+,-,1,M4.0,L16,ZPC(WHT),SWRCH18A,-	8	
17-3	6501-000123	CABLE TIE	DACT-140,-,W3.6,L146,NTR,NYLON66	2	
17-4	DA31-00123A	FAN-BACKWARD	-,USP 05,ABS(HP-0760),-,2.0mmAq/0.33CMM (8.4	1	
17-5	DA31-00124A	FAN-AX100W4CC-T1	-,TD-PJT,ABS,-,-	1	
17-6	DA31-00146H	MOTOR BLDC	-,2950,-,DC12V,150mA,-,-,2.1W,-,-,-,-,-,-,-	1	
17-7	DA31-00146E	MOTOR FAN-BLDC	DREP5020LB,BLDC Motor,0.268,-,3.21,-,2520,-,DC 12V,-,29dB,-	1	PC
17-8	DA47-00261A	HEATER CORD-DUCT(FRE), (RFG238)	-,AW-PJT,P-CORD,4W,-,115V,3306 Ω,-,-,DUCT(FRE)	1	
17-8	DA47-00261D	HEATER CORD-DUCT FRE (RFG237)	AW-PJT,P-CORD,7W,115V,DUCT(FRE)	1	
17-9	DA61-03183A	CASE-MOTOR FRE	AW-PJT,BUBBLE PP,-,-,-,NTR,-	1	
17-10	DA61-03617A	CASE-MOTOR FRE ICE	AW-PJT,PP(BJ-730),-,-,-,WHITE,-	1	
17-11	DA61-05328A	PLATE-INS EVAP FRE ICE	AW2-TIM,SAZCC,T0.3,TWIN I/M	1	
17-12	DA61-03627A	PLATE-DRAIN FAN	AW-PJT,AL,T0.8,-,-,-,-	1	
17-13	DA61-04346A	PLATE-DRAIN ICE	AW2-PJT,GA,T0.3,-,-,-,-	1	
17-14	DA61-20128A	SPRING ETC-FAN	-,STS304,PI7.8,-,OD1.0,-,-,-,-,-,FD	2	PC
17-15	DA62-02288A	INSULATION EVAP-FRE ICE A (RFG238)	AW2-CD,FOAM-PS,NTR,TWIN I/M	1	
17-15	DA62-02247A	INSULATION-EVAP FRE ICE (RFG237)	AW2 GE,FOAM-PS	1	
17-16	DA63-01146A	GROMMET-MOTOR,REAR	A-TOP,NBR,-,-,-,ID6.5,OD42,BLK,BLDC	2	
17-17	DA63-01808A	GROMMET-MOTOR,FRONT	BLDC,NBR,BLACK,-,-,-,-,-,H20	2	
17-18	DA63-01809A	COVER MOTOR-BLDC	BLDC-NEW,PP,NTR,-,-,-,-,-,BJ-730	2	PC
17-19	DA63-05060A	COVER EVAP-FRE ICE (RFG238)	AW2-TIM,PP,NTR,TWIN I/M	1	
17-19	DA63-05125A	COVER-EVAP FRE ICE (RFG237)	AW1 BEST,PP,NTR	1	
17-20	DA63-40167A	GROMMET-COVER CHIL	-,SILICON,T3.0,-,L16,-,-,BLACK,-	2	
17-21	DA67-02016A	DUCT-ICE SUB	AW2-PJT,TALC PP,-,-,-,NTR,-	1	
17-22	DA96-00042D	ASSY-HARNESS BLDC	AD-PJT(BLDC),F-FAN	1	
17-23	DA96-00042N	ASSY-HARNESS MOTOR	AW-PJT,non waterproof housing	1	
17-24	DA62-02289A	INSULATION EVAP-FRE ICE B (RFG238)	AW2-CD,FOAM-PS,NTR,TWIN I/M	1	
18	DA97-02019A	ASSY COVER-SENSOR	COMBI-PJT,-,-,-,-,-,-,COOL-WHITE,SC-02740R	1	
18-1	DA32-10105B	SENSOR TEMP	-,-,-,-,-,-,TEMP CAP TYPE,-,-	1	
18-2	DA63-10467B	COVER-SENSOR	COMBI-PJT,TALC PP,-,-,-,SC-02740R,COOL WHITE,-,-	1	
19	DA97-07592A	ASSY ICE MAKER	AW-PJT,115V,60Hz,-,-,-	1	

MEMO

5-2) Refrigerator



EXPLODED VIEW& PARTS LIST

■ Parts List of Refrigerator

NO	CODE-NO	PART NAME	SPEC	QUANTITY	REMARK
1	DA96-00762A	ASSY EVAP-REF	AW PJT PIN 120V/120W	1	
1-1	6501-000123	CABLE TIE	DACT-140,-,W3.6,L146,NTR,NYLON66	2	
1-2	DA32-00006S	SENSOR TEMP-R-DEF	PX-41C, 502AT,AW-PJT,-40~110℃,5V,-,-,R-DEF SENSOR,YEL,400MM	1	
1-4	DA47-00244Q	HEATER-METAL SHEATH	NW2-PJT,-,120W,-,115V,110.2 ohm,-,-,R-ROOM	1	
1-5	DA59-00399A	EVAP REF	AW3,AL	1	
1-6	DA60-90005A	RIVET-AVEX	AL,D3.2,L9.83,-,-	1	
1-7	DA61-03644A	PLATE-EVAP HEATER	AW-PJT,AL,T0.7,-,-,-	1	
1-8	DA61-03683A	FIXER-SENSER	AW-PJT,PP,-,NTR,FH-44N	1	
1-9	DA61-06186A	PLATE-DRAIN REF	AL,T0.4	1	
1-10	DA61-06013B	FIXER-WIRE	PP NTR	1	
1-11	DA61-05834A	FIXER-FUSER REF	PP FH44N	1	
1-12	DA61-05835B	FIXER-HETER REF	PBT	2	
1-13	DA61-05160A	FIXER-FUSE	PP NTR	1	
2	DA63-02902B	COVER-FIXER HOUSING V	NEXT-PJT,GALVA,T0.3,W31,L42,-,-,-	2	
3	DA97-06323C	ASSY COVER-EVAP REF	AW2-PJT,TWIN COOLING,BLDC,non waterproof housing	1	
3-1	6002-000213	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC(WHT),SWRCH18A,-	3	
3-2	6002-000215	SCREW-TAPPING	TH,+,-,1,M4.0,L16,ZPC(WHT),SWRCH18A,-	4	
3-3	DA31-00124A	FAN-AX100W4CC-T1	-,TD-PJT,ABS,-,-	1	
3-4	DA31-00146H	MOTOR BLDC	-,2950,-,DC12V,150mA,-,-,2.1W,-,-,-,-,-,-	1	
3-5	DA32-10105X	SENSOR TEMP	PX-41C,QUEEN PJT,-10,5V,-,-,FSENSOR, YELLOW,500MM	1	
3-6	DA61-03181A	CASE-MOTOR REF	AW-PJT,BUBBLE PP,-,-,-,NTR,-	1	
3-7	DA61-03182A	GUIDE-INS EVAP REF	AW-PJT,ABS,-,-,-,NTR,-	1	
3-8	DA61-03186A	PLATE-INS EVAP REF	AW-PJT,GALVANUME,T0.4,-,-,-	1	
3-9	DA61-03599A	PLATE-HOUSING REF	AW-PJT,GALVALUME,T0.3,-,-,-	1	
3-10	DA61-20128A	SPRING ETC-FAN	-,STS304,PI7.8,-,OD1.0,-,-,-,-,-,FD	1	
3-11	DA62-01383A	INSULATION-EVAP SUB	AW-PJT,FOAM-PS,-,-,-,-,-,-,-	1	
3-12	DA62-01423A	INSULATION-EVAP DUCT	AW-PJT,FOAM-PS,T20,W44.5,L45,-,-,-,-	2	
3-13	DA62-01804A	INSULATION-EVAP REF	AW2-PJT,FOAM-PS,-,-,-,-,-,-,-,33 MAGNIFICATION	1	
3-14	DA62-01805A	INSULATION-EVAP REAR	AW2-PJT,FOAM-PS,-,-,-,-,-,-,-,33 MAGNIFICATION	1	
3-15	DA63-01146A	GROMMET-MOTOR,REAR	A-TOP,NBR,-,-,-,ID6.5,OD42,BLK,BLDC	1	
3-16	DA63-01808A	GROMMET-MOTOR,FRONT	BLDC,NBR,BLACK,-,-,-,-,-,H20	1	
3-17	DA63-01809A	COVER MOTOR-BLDC	BLDC-NEW,PP,NTR,-,-,-,-,-,BJ-730	1	
3-18	DA63-04218A	COVER-EVAP REF	AW2-PJT,PP,-,-,-,-,-,COOL-WHITE(SC-02740R),-	1	
3-19	DA63-40167A	GROMMET-COVER CHIL	-,SILICON,T3.0,-,L16,-,-,BLACK,-	1	
3-20	DA64-02065A	TRIM-COVER EVAP REF	AW-PJT,ABS,-,-,-,COOL WHITE,-	1	
3-21	DA96-00042N	ASSY-HARNESS MOTOR	AW-PJT,non waterproof housing	1	
4	DA97-08783A	ASSY CASE LAMP-REF	AW2,LED 21EA	1	
4-2	DA61-06190A	CASE LAMP-REF	AW2,ABS,-,-,-,COOL WHITE,-	1	
4-3	DA96-00398J	ASSY-LAMP LED	AW2-ND,3chip 21EA	1	
5	DA63-05612A	COVER LAMP-REF	AW2 LED SAN, Transparent	1	
6	DA61-04329A	ANGLE-SHELF REF SIDE R	AW2(PANTRY),SECC1,T2.0,-,-,COOL WHITE,Powder Coating	1	
7	DA97-06372A	ASSY-ANGLE SHELF REF MID	AW2,-,-,-	1	
8	DA67-01688A	CAP-ANGLE	AW-PJT,TALC PP,-,-,-,COOL WHITE,-	1	
9	DA97-07558A	ASSY SHELF-INSERT REF SLIDE	AW2 CD,-	2	
9-1	DA01-00520A	GLASS-SHELF INSERT REF FIX	398*322.8,T3.2,-	1	
9-2	DA91-02881A	ASSY HANGER-SHELF SLIDE	AW2 CD,-,COOL WHITE,-,-	1	
10	DA97-07565A	ASSY COVER-VEG REF	AW2-CD PJT,-,-,-,-,-,-,-,-	1	
10-1	6002-000213	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC(WHT),SWRCH18A,-	4	
10-2	DA01-00524A	GLASS-COVER VEG REF	790*276.8,T3.2,-	1	
10-3	DA61-03166A	FIXER-COVER VEG	AW,TALC PP,-,COOL WHITE,-	2	
10-4	DA61-05222A	REINF-COVER VEG	AW2 CD,SHP1,-,-,-,BLACK,-	1	
10-5	DA63-04956A	COVER-VEG REF	AW2 CD,HIPS,-,-,-,-,COOL WHITE,-	1	

■ Parts List of Refrigerator

NO	CODE-NO	PART NAME	SPEC	QUAN TITY	REMARK
10-6	DA64-00817A	KNOB-HUMIDITY	QUEEN,ABS,-,-,-,-,-,-,-	2	
10-7	DA66-00438A	LEVER-HUMIDITY	AW,HIPS,-,-,-,-,COOL WHITE,-	2	
10-8	DA66-10104A	ROLLER-FRE	POM,-,-,D22,-,-,	2	
11	DA97-07564A	ASSY RAIL-VEG L	AW2-CD PJT,-,-,-,-,-	1	
11-1	DA61-05208A	RAIL-VEG L	AW2 CD,PP,-,-,-,COOL WHITE,-	1	
11-2	DA66-10104A	ROLLER-FRE	POM,-,-,D22,-,-,	1	
12	DA97-07563A	ASSY RAIL-VEG R	AW2-CD PJT,-,-,-,-,-	1	
12-1	DA61-05209A	RAIL-VEG R	AW2 CD,PP,-,-,-,COOL WHITE,-	1	
12-2	DA66-10104A	ROLLER-FRE	POM,-,-,D22,-,-,	1	
13	DA97-07561A	ASSY CASE-VEG REF L	AW2-CD PJT,-,-,-,-,-	1	
13-1	DA61-05210A	CASE-VEG L	AW2 CD,SAN,-,-,-,NTR,-	1	
13-2	DA61-04294A	SUPPORT-TRIM VEG R	AW2-PJT,HIPS,-,-,-,COOL-WHITE(SC-02740R),-	1	
13-3	DA61-04295A	SUPPORT-TRIM VEG L	AW2-PJT,HIPS,-,-,-,COOL-WHITE(SC-02740R),-	1	
13-4	DA63-04282A	COVER-VEG FRONT L	AW2-PJT,SAN,-,-,-,-,-,COOL-WHITE(SC-02740R),-	1	
13-5	DA63-04283A	COVER-VEG TRIM L	AW2-PJT,SAN,-,-,-,-,-,COOL-WHITE(SC-02740R),-	1	
13-6	DA66-10104A	ROLLER-FRE	POM,-,-,D22,-,-,	2	
13-7	DA71-20145A	FIXER-ROLLER	-,PA,--,-	2	
14	DA97-07562A	ASSY CASE-VEG REF R	AW2-CD PJT,-,-,-,-,-	1	
14-1	DA61-04294A	SUPPORT-TRIM VEG R	AW2-PJT,HIPS,-,-,-,COOL-WHITE(SC-02740R),-	1	
14-2	DA61-04295A	SUPPORT-TRIM VEG L	AW2-PJT,HIPS,-,-,-,COOL-WHITE(SC-02740R),-	1	
14-3	DA61-05211A	CASE-VEG R	AW2 CD,SAN,-,-,-,NTR,-	1	
14-4	DA63-04284A	COVER-VEG FRONT R	AW2-PJT,SAN,-,-,-,-,-,COOL-WHITE(SC-02740R),-	1	
14-5	DA63-04285A	COVER-VEG TRIM R	AW2-PJT,HIPS,-,-,-,-,-,COOL-WHITE(SC-02740R),-	1	
14-6	DA66-10104A	ROLLER-FRE	POM,-,-,D22,-,-,	2	
14-7	DA71-20145A	FIXER-ROLLER	-,PA,--,-	2	
15	DA97-06333A	ASSY PARTITION-VEG	AW2-PJT,-,-,-,-,-,-	1	
15-1	DA63-04286A	COVER-PARTITION VEG	AW2-PJT,SAN,-,-,-,-,-,NTR,-	1	
15-2	DA67-02007A	PARTITION-VEG	AW2-PJT,TALC PP,-,-,-,COOL-WHITE(SC-02740R),-,-	1	
16	DA97-07129C	ASSY COVER T/WATER	AW2,ASSY,-,-,-,-,-,-,-	1	
16-1	6002-000213	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC(WHT),SWRCH18A,-	1	
16-2	DA47-00295A	HEATER-WATER TANK	-,AW-PJT(09),P-CORD,2W,-,12V,72.0 ohm,-,-,-	1	
16-3	DA63-04889A	COVER-TANK WATER	AW2,PP,-,-,-,-,-,COOL WHITE,BJ730,SC-02740R	1	
16-4	DA63-04674A	COVER-HEATER WATER TANK	AW-PJT,PP,-,-,-,-,-,NATURAL,WATER DRIBBLE	1	
17	DA97-07521A	ASSY COVER-SLIDE PANTRY	AW2 CD,-,-,-,-,-,-,-,-	1	
17-1	DA63-04934A	COVER-SLIDE PANTRY B	AW2 CD,ABS,-,-,-,-,-,COOL WHITE(SC-02740R),-	1	
17-2	DA63-04935A	COVER-SLIDE PANTRY A	AW2 CD,SAN,-,-,-,-,-,NTR,-	1	
17-3	DA66-10104A	ROLLER-FRE	POM,-,-,D22,-,-,	2	
18	DA97-07522B	ASSY SHELF-PANTRY	AW2 CD,NO LED	1	
18-1	DA61-03174A	REINF-SHELF PANTRY	AW-PJT,SECC1,T1.0,-,-,Black,-	1	
18-2	DA64-02901A	WINDOW-SHELF PANTRY	AW2 CD,GPPS,-,-,-,-,NTR,-	2	
18-3	DA67-02283A	SHELF-PANTRY	AW2 CD,HIPS,-,-,-,COOL WHITE(SC-02740R),-	1	
19	DA97-06324B	ASSY COVER-MOTOR DAMPER	AW2-PJT,COOL-WHITE,0.5W	1	
19-1	DA31-00071F	MOTOR DC-DAMPER	NSBY001TH1,DC12V,MAX 60mA,AW2-CD	1	
19-2	DA32-00006R	SENSOR TEMP-PANTRY	PX-41C, 502AT,AW-PJT,-40~110℃,5V,-,-,PANTRY SENSOR,YEL,200MM	1	
19-3	DA62-01380A	INSULATION-MOTOR DC DAMPER	AW-PJT,FOAM-PS,-,-,-,NTR,-,-,-	1	
19-4	DA63-04274A	COVER-MOTOR DC DAMPER	AW2-PJT,PP,-,-,-,-,-,COOL-WHITE(SC-02740R),-	1	
20	DA61-04285A	GUIDE-FRENCH	AW2-PJT,PC-ABS,-,-,-,COOL-WHITE(SC-02740R),-	1	
21	DA63-04150B	COVER-FILTER	AW,HIPS,-,96.0,73.6,-,-,COOL WHITE,1° SILK PRINTING	1	
22	DA97-06317E	ASSY CASE-FILTER	AW2 CD,OUTLET(BLACK)	1	
23	DA97-07526A	ASSY COVER-RAIL PANTRY L	AW2 CD,-,-,-,-,-,-,-	1	
23-1	6002-000458	SCREW-TAPPING	FH,+,-,2,M4.0,L14,PASS,STS304,-	2	
23-2	DA63-04936A	COVER-RAIL PANTRY L	AW2 CD,HIPS,COOL WHITE	1	

■ Parts List of Refrigerator

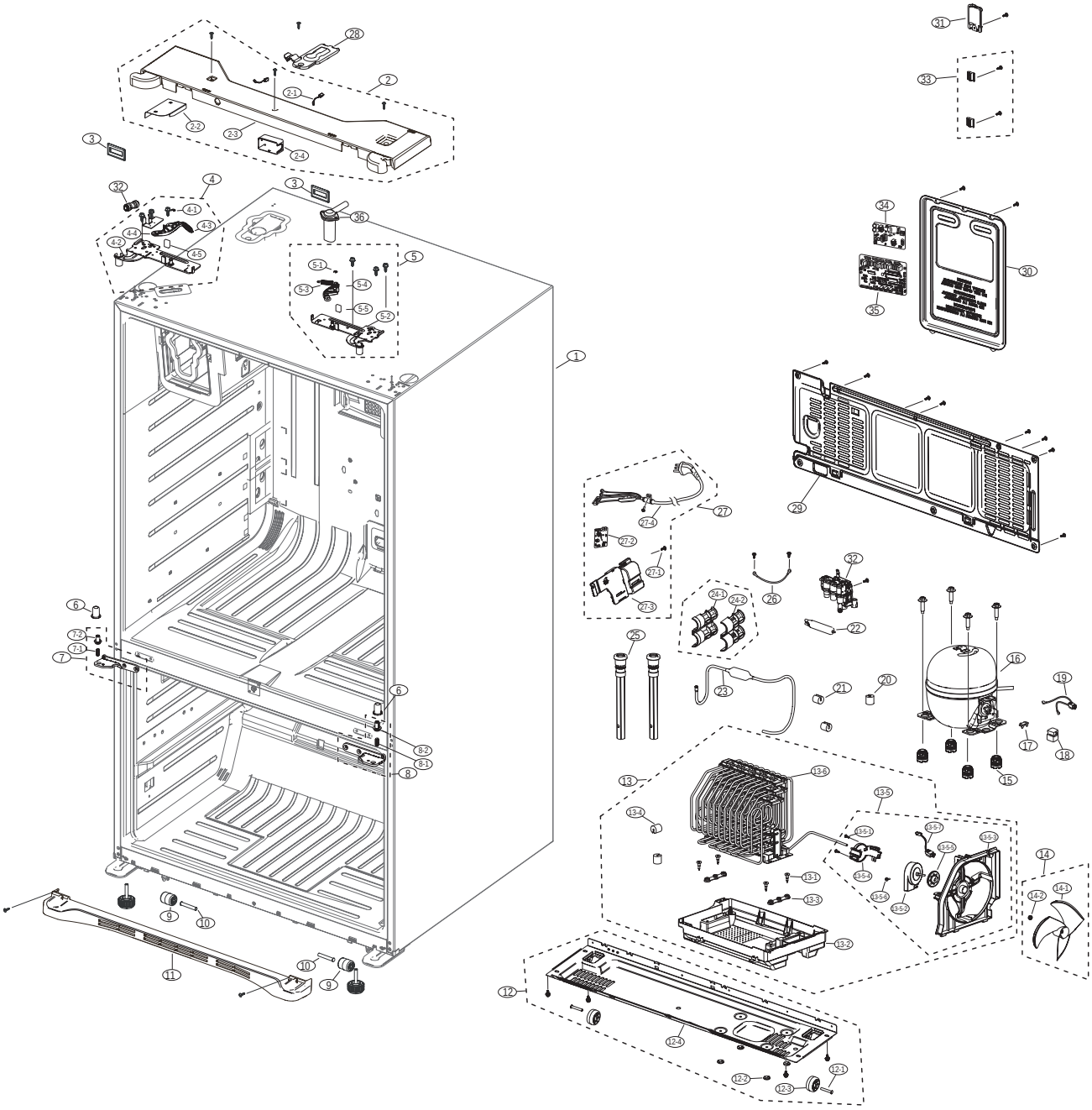
NO	CODE-NO	PART NAME	SPEC	QUAN TITY	REMARK
23-3	DA97-07524A	ASSY RAIL-PANTRY L	AW2 CD,-,-,-,-,STS430	1	
24	DA97-07520A	ASSY CASE-PANTRY	AW2 CD,-,-,-,-,-	1	
24-1	DA61-05179A	CASE-PANTRY	AW2 CD,HIPS,-,-,-,COOL-WHITE(SC-02740R),-	1	
24-2	DA61-04288A	SUPPORT-TRIM PANTRY R	AW2-PJT,HIPS,-,-,-,COOL-WHITE(SC-02740R),-	1	
24-3	DA61-04289A	SUPPORT-TRIM PANTRY L	AW2-PJT,HIPS,-,-,-,COOL-WHITE(SC-02740R),-	1	
24-4	DA63-04275A	COVER-PANTRY FRONT	AW2-PJT,SAN,-,-,-,-,-,NTR,-	1	
24-5	DA63-04276A	COVER-PANTRY TRIM	AW2-PJT,HIPS,-,-,-,-,-,COOL-WHITE(SC-02740R),-	1	
24-6	DA66-00580A	ROLLER-PANTRY	AW2-PJT,POM,-,-,NTR,-,-	2	
24-7	DA61-05181A	GUIDE-PANTRY	AW2 CD,TALC PP,-,-,-,COOL WHITE,-	1	
25	DA97-07527A	ASSY COVER-RAIL PANTRY R	AW2 CD,-,-,-,-,-,-,-,-	1	
25-1	6002-000458	SCREW-TAPPING	FH,+,-,2,M4.0,L14,PASS,STS304,-	2	
25-2	6002-000630	SCREW-TAPPING	PH,+,-,2S,M3,L8,ZPC(WHT),SWRCH18A,-	2	
25-3	DA41-00618A	PBA PANEL-PANTRY	AW CD-PJT,PANTRY ROOM TACT,FR- 1,62.0*23.5*1.6T,BLUE/TACT SW,13V,-,N,-,-,-	1	
25-4	DA63-04937A	COVER-RAIL PANTRY R	AW2 CD,HIPS,COOL WHITE	1	
25-5	DA64-02903A	INLAY-CONTROL PANEL	AW2 CD,PC,T0.3,-,-,-,-	1	
25-6	DA97-07525A	ASSY RAIL-PANTRY R	AW2 CD,-,-,-,-,-,STS430	1	
26	DA29-00003G	FILTER WATER-ASSY	-,ATOP,-,-,D81, H143,-,-,NSF42, 53,-,-	1	
27	DA97-07560A	ASSY SHELF-INSERT REF FOLD	AW2 CD,-	1	
27-1	DA61-03571A	HINGE-SHELF-BODY-UPP	AW-PJT,PBT,-,40,75,-,-,-	2	
27-2	DA67-02303A	SHELF-INSERT REF FOLD	AW2 CD,PP,T 2.5,-,-,COOL WHITE,-	1	
27-3	DA97-05251B	ASSY HINGE-SHELF	AW-PJT,-,40,75,COOL-WHT,-,PC,FOLDER SHELF SUB ASSY	2	
28	DA97-07557A	ASSY SHELF-QUICK SPACE	AW2 CD,-	1	
28-1	DA01-00522A	GLASS-SHELF QUICK SPACE FRONT	353.5*157.2,T 3.2,-	1	
28-2	DA01-00521A	GLASS-SHELF QUICK SPACE REAR	376.8*151.8,T 3.2,-	1	
28-3	DA67-02290A	SHELF-QUICK SPACE FRONT	AW2 CD,ABS,-,-,-,COOL WHITE,-	1	
28-4	DA67-02289A	SHELF-QUICK SPACE REAR	AW2 CD,ABS,-,-,-,COOL WHITE,-	1	
28-5	DA91-02880A	ASSY HANGER-QUICK SPACE	AW2 CD,-,COOL WHITE,-,-	1	
28-6	6002-001397	SCREW-TAPPING	TH,+,-,B,M4,L8,ZPC(WHT),SWRCH18A,HD6.5,HT2	6	
29	DA61-04330A	ANGLE-SHELF REF SIDE L	AW2(PANTRY),SECC1,T2.0,-,-,COOL WHITE,Powder Coating	1	
30	DA97-07602A	ASSY TRAY-ICE BUCKET	AW2 CD,-,-,-,-,-	1	
30-1	DA63-03687A	COVER-ICE BUCKET A	AW-PJT,HIPS,T2.5,-,-,-,-,WHT,187*266*120	1	
30-2	DA62-01475A	INSULATION-COVER ICE BUCKET	AW-PJT,EPS,40,182,261,WHT,-,-,-	1	
30-3	DA63-03737A	GASKET-COVER ICE BUCKET	AW-PJT,SILICONE,1.0,-,730,GRAY,-,OD5.0	1	
30-4	DA63-03686A	COVER-CRUSHER	AW-PJT,HIPS,T3,-,-,-,-,WHT,140*140*55	1	
30-5	DA62-01569A	INSULATION-COVER ICE BUCKET-SUB	AW-PJT,EPS,20,30,115,WHT,-,-,-	1	
30-6	DA61-03505A	GUIDE-CRUSHER	AW-PJT,HIPS,T3,-,-,WHT,48*96*60	1	
30-7	DA66-00476A	LEVER-ICE BUCKET B	AW-PJT,ABS,13,40,67,-,WHT,-	1	
30-8	DA61-03506A	SPRING ETC-COVER BUCKET	AW-PJT,STS304, ø1.2,ID 9.6,OD12,-,-,25,-,-,-	1	
30-9	DA66-00477A	LEVER-ICE BUCKET C	AW-PJT,ABS,13,40,115,-,WHT,-	1	
30-10	DA63-03688A	COVER-ICE BUCKET B	AW-PJT,HIPS,T2,-,-,-,-,WHT,181*266*40	1	
30-11	DA66-00475A	LEVER-ICE BUCKET A	AW-PJT,ABS,T2.0,-,-,-,WHT,15*50*11	1	
30-12	DA67-01719A	CAP-LEVER ICE BUCKET	AW-PJT,ABS,T1.0,-,-,WHT, ø9.8*6	1	
30-13	DA65-00056A	CLAMPER CORE-HELIX	AW2 CD,STS304,-,-,-,-	1	
30-14	DA63-04973A	TRAY-ICE BUCKET	AW2 CD,TALC PP,-,-,-,-,COOL WHITE,-	1	
30-15	DA61-20124D	SPRING ETC-DISPENSER	AW-BEST-GE-OEM,STS304,0.9,-,-,-,9,-,-,-,-	1	
30-16	DA66-00478B	LEVER-CUBE	AW2 CD-PJT,MSWR10, ø4.5,-,L311,-,-,-	1	
31	DA90-05203A	ASSY ICE MAKER	AW2-C/D,LED+TWIN,-,-,-,Y	1	
32	DA97-05246F	ASSY CASE-AUGER MOTOR	AW2 CD-PJT,115V/60Hz	1	
32-1	DA61-03517A	CASE-AUGER MOTOR	AW-PJT,HIPS(HR-1360),-,-,-,NTR,-	1	
32-2	DA31-00105G	MOTOR GEARED-AUGER	ISG3240SSI-1,18RPM,127Kgf.cm,192:1,110~127V 60Hz,2.3A,-,-,4OT,-,-	1	
32-3	DA74-40151G	VALVE-SOLENOID	SR-S6586B,-,-,-,-,CUBE-SN1,110-127[V]42 Ω	1	
32-4	DA63-90008A	BUSH-SOLENOID	-,POM,-,-,-,SC-93438R,-	1	

■ Parts List of Refrigerator

NO	CODE-NO	PART NAME	SPEC	QUANTITY	REMARK
32-5	DA66-90003A	GEAR-SOLENOID	POM,-,-,-,-,SC-93438R	1	
32-6	DA61-60001A	SLIDER-SOLENOID DISP	-,POM,-,-,-,-,-	1	
32-7	DA61-01659B	PLATE-DRIVE AUGER	NEXT-PJT,STS304,T2.5,-,-,-,-	1	
32-8	DA71-00163A	FIXER-NUT	ZIPEL,STS420,T1,-,CLIP,STS420-J2	1	
32-9	DA96-00036Y	ASSY W/HARNESS-SUB EM	AW2 CD,100-240V	1	
32-10	DA63-02012B	COVER-MOTOR AUGER SUB	A-TOP,ABS NON-FLAM. NTR,-,-,-,-,-,NTR,-	1	
33	DA63-04972A	COVER-HARNESS ICE ROOM	AW2 CD,ABS,T 2.5,-,-,-,-,COOL WHITE,-	1	

MEMO

5-3) Cabinet



EXPLODED VIEW& PARTS LIST

■ Parts List of Cabinet

NO	CODE-NO	PART NAME	SPEC	QUAN TITY	REMARK
1	DA90-06494D	ASSY CABINET FORM	RFG237AC,CANADA,Real STS,23cu.ft	1	
1	DA90-04495R	ASSY CABINET FORM	23CU.FT,LED, TWIN,BP,-,-,-,-,-,-,-,-,-	1	
1	DA90-04495Q	ASSY CABINET FORM	23CU.FT,LED, TWIN,WP,-,-,-,-,-,-,-,-,-	1	
2	DA97-07571A	ASSY TOP-TABLE	AW2 CD,RS	1	
2-1	DA34-00043B	SWITCH REED-ASS'Y	200VDC,0.5A,MDCG-4 type	2	
2-2	DA61-03678A	PLATE-TOP TABLE	AW-PJT,SGCC,T0.3,64.5,125,AW-BEST	1	
2-3	DA64-02917A	TOP TABLE	AW2 CD,HIPS,CREAMY STS,-,-,-,-	1	
2	DA97-07571B	ASSY TOP-TABLE	AW2 CD,I BLACK	1	
2-1	DA34-00043B	SWITCH REED-ASS'Y	200VDC,0.5A,MDCG-4 type	2	
2-2	DA61-03678A	PLATE-TOP TABLE	AW-PJT,SGCC,T0.3,64.5,125,AW-BEST	1	
2-3	DA64-02917B	TOP TABLE	AW2 CD,HIPS,I BLACK,-,-,-,-	1	
2	DA97-07571C	ASSY TOP-TABLE	AW2 CD,SNOW WHITE	1	
2-1	DA34-00043B	SWITCH REED-ASS'Y	200VDC,0.5A,MDCG-4 type	2	
2-2	DA61-03678A	PLATE-TOP TABLE	AW-PJT,SGCC,T0.3,64.5,125,AW-BEST	1	
2-3	DA64-02917C	TOP TABLE	AW2 CD,HIPS,SNOW WHITE,-,-,-,-	1	
3	DA67-02304A	CAP-TOP TABLE	AW2 CD,ABS,-,-,-,CREAMY STS,-	2	
3	DA67-02304B	CAP-TOP TABLE	AW2 CD,ABS,-,-,-,I BLACK,-	2	
3	DA67-02304C	CAP-TOP TABLE	AW2 CD,ABS,-,-,-,SNOW WHITE,-	2	
4	DA97-07822F	ASSY HINGE-UPP L	AW2 CD,T2.9,CREMMY STS,BEST	1	
4-1	DA60-00162A	FASTENER-RING	AW-PJT,STS304,ID5,T0.5,-,OD11,BLACK,-,-	1	
4-2	DA61-03239A	HINGE-UPP L	AW-PJT,SHP1,T2.9,-,-,-,-	1	
4-3	DA61-03301C	SPRING ETC-AUTO CLOSE	AW-PJT,HSWR,1.4,9.2,12,-,17 3/4,-,-,-,-	1	
4-4	DA97-04903B	ASSY LEVER-AUTO CLOSE	AW-PJT,-,-,-,-,-,CREAMY STS,-	1	
4-5	DA63-03673A	GROMMET-LEVER	AW-PJT,NBR,-,-,-,-,-,BLACK,-	1	
4	DA97-07822G	ASSY HINGE-UPP L	AW2 CD,T2.9,BLACK,BEST	1	
4-1	DA60-00162A	FASTENER-RING	AW-PJT,STS304,ID5,T0.5,-,OD11,BLACK,-,-	1	
4-2	DA61-03239A	HINGE-UPP L	AW-PJT,SHP1,T2.9,-,-,-,-	1	
4-3	DA61-03301C	SPRING ETC-AUTO CLOSE	AW-PJT,HSWR,1.4,9.2,12,-,17 3/4,-,-,-,-	1	
4-4	DA97-04903A	ASSY LEVER-AUTO CLOSE	AW-PJT,POM,-,-,-,-,BLACK,-	1	
4-5	DA63-03673A	GROMMET-LEVER	AW-PJT,NBR,-,-,-,-,-,BLACK,-	1	
4	DA97-07822H	ASSY HINGE-UPP L	AW2 CD,T2.9,WHITE,BEST	1	
4-1	DA60-00162A	FASTENER-RING	AW-PJT,STS304,ID5,T0.5,-,OD11,BLACK,-,-	1	
4-2	DA61-03239A	HINGE-UPP L	AW-PJT,SHP1,T2.9,-,-,-,-	1	
4-3	DA61-03301C	SPRING ETC-AUTO CLOSE	AW-PJT,HSWR,1.4,9.2,12,-,17 3/4,-,-,-,-	1	
4-4	DA97-04903C	ASSY LEVER-AUTO CLOSE	AW-PJT,-,-,-,-,-,SNOW WHITE,-	1	
4-5	DA63-03673A	GROMMET-LEVER	AW-PJT,NBR,-,-,-,-,-,BLACK,-	1	
5	DA97-04875G	ASSY HINGE UPP-R	AW2,-,-,-,-,Creamy-STS,SHIM DELETE	1	
5-1	DA60-00162A	FASTENER-RING	AW-PJT,STS304,ID5,T0.5,-,OD11,BLACK,-,-	1	
5-2	DA61-03240A	HINGE-UPP R	AW-PJT,SHP1,T2.9,-,-,-,-	1	
5-3	DA61-03301A	SPRING ETC-AUTO CLOSE	AW-PJT,HSWR,PI 1.4	1	
5-4	DA97-04903B	ASSY LEVER-AUTO CLOSE	AW-PJT,-,-,-,-,-,CREAMY STS,-	1	
5-5	DA63-03673A	GROMMET-LEVER	AW-PJT,NBR,-,-,-,-,-,BLACK,-	1	
5	DA97-04875F	ASSY HINGE UPP-R	AW2,-,-,-,-,I-BLACK,SHIM DELETE	1	
5-1	DA60-00162A	FASTENER-RING	AW-PJT,STS304,ID5,T0.5,-,OD11,BLACK,-,-	1	
5-2	DA61-03240A	HINGE-UPP R	AW-PJT,SHP1,T2.9,-,-,-,-	1	
5-3	DA61-03301A	SPRING ETC-AUTO CLOSE	AW-PJT,HSWR,PI 1.4	1	
5-4	DA97-04903A	ASSY LEVER-AUTO CLOSE	AW-PJT,POM,-,-,-,-,BLACK,-	1	
5-5	DA63-03673A	GROMMET-LEVER	AW-PJT,NBR,-,-,-,-,-,BLACK,-	1	
5	DA97-04875H	ASSY HINGE UPP-R	AW2,-,-,-,-,Snow-White,SHIM DELETE	1	
5-1	DA60-00162A	FASTENER-RING	AW-PJT,STS304,ID5,T0.5,-,OD11,BLACK,-,-	1	
5-2	DA61-03240A	HINGE-UPP R	AW-PJT,SHP1,T2.9,-,-,-,-	1	
5-3	DA61-03301A	SPRING ETC-AUTO CLOSE	AW-PJT,HSWR,PI 1.4	1	

EXPLODED VIEW& PARTS LIST

■ Parts List of Cabinet

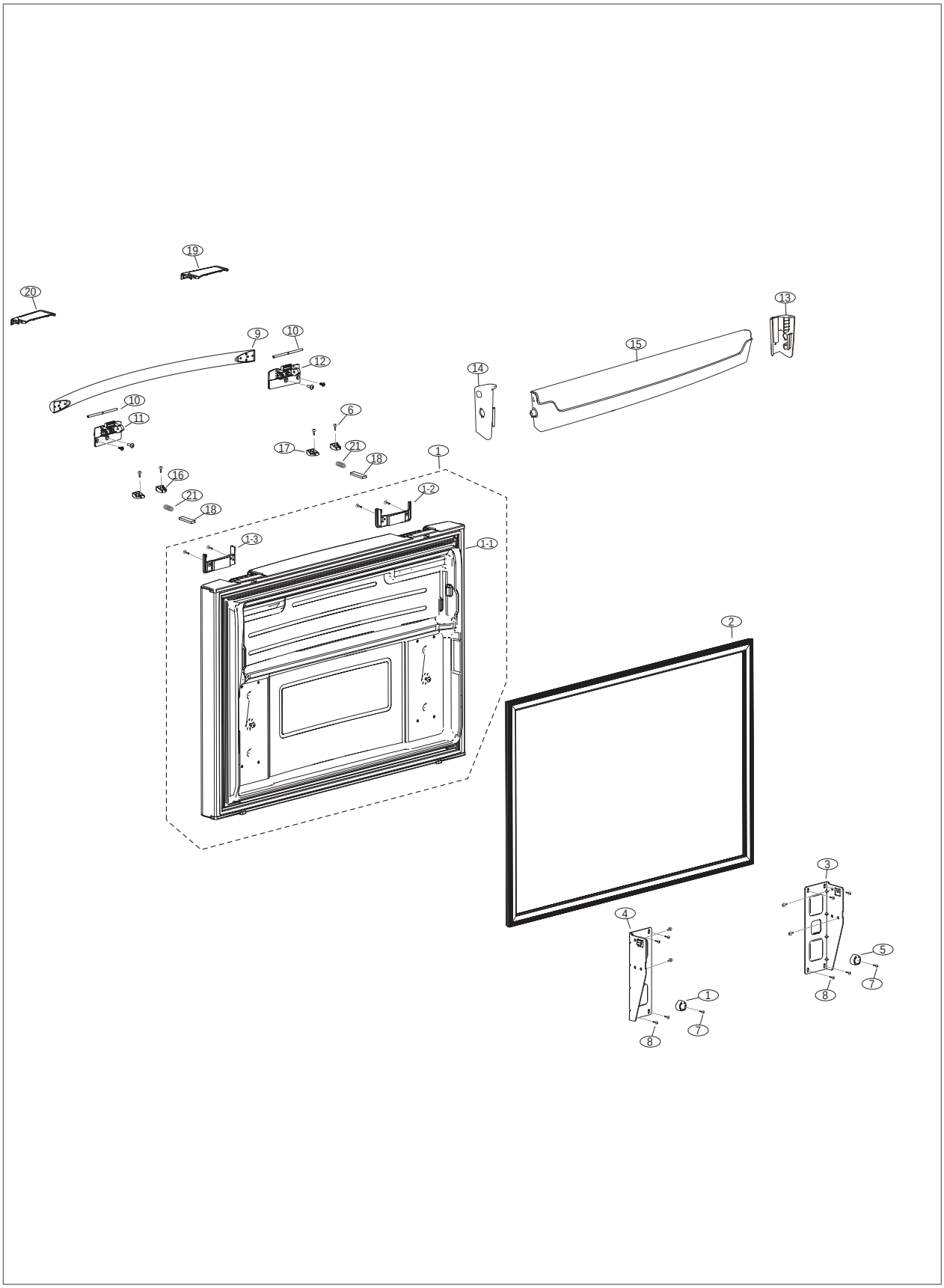
NO	CODE-NO	PART NAME	SPEC	QUANTITY	REMARK
5-4	DA97-04903C	ASSY LEVER-AUTO CLOSE	AW-PJT,-,-,-,-,-,SNOW WHITE,-	1	
5-5	DA63-03673A	GROMMET-LEVER	AW-PJT,NBR,-,-,-,-,-,BLACK,-	1	
6	DA63-02905A	GROMMET HINGE-MID,R	NEXT,POM,T2.0,-,-,-,-,WHITE,-	2	
7	DA97-07514A	ASSY HINGE MID-L	AW2 CD-PJT,T4.5,-,-,Ni-Cr Plated,-,-	1	
7-1	6011-001442	BOLT-SOCKET	M8,L13.4,ZPC(BLK),SCM435,-	1	
7-2	DA61-04916D	HINGE-MID L	AW2,SHP1,T4.5,Ni-Cr+Cu Plating,Heat Treatment,SNC2	1	
8	DA97-07515A	ASSY HINGE MID-R	AW2 CD-PJT,T4.5,-,-,Ni-Cr Plated,-,-	1	
7-1	6011-001442	BOLT-SOCKET	M8,L13.4,ZPC(BLK),SCM435,-	1	
7-2	DA61-04917D	HINGE-MID R	AW2,SHP1,T4.5,Ni-Cr+Cu Plating,Heat Treatment,SNC2	1	
9	DA61-04702A	CASTER-FRONT	AW-PJT,PP,-,35,NTR,35,PP+TPE	2	
10	DA61-01920A	CASTER-RIVET	(ZPC2),MSWR10,OD8.0,L54,-,-,-	2	
11	DA63-04975A	COVER-LEG FRONT	AW2 CD,PP,T2.5,-,-,-,-,CREAMY STS,-	1	
11	DA63-04975B	COVER-LEG FRONT	AW2 CD,PP,T2.5,-,-,-,-,I BLACK,-	1	
11	DA63-04975C	COVER-LEG FRONT	AW2 CD,PP,-,-,-,-,-,SNOW WHITE,-	1	
12	DA97-07547A	ASSY CHASSIS-COMP	AW2-CD,-,-,-,-,-,PP+TPE CASTER	1	
12-1	DA66-00649A	SHAFT-CASTER	AW-PJT,MSWR10,L46,OD8.2,-,-,ZPC2	2	
12-2	DA61-01867A	BRACKET-COMP	A-TOP,SGHC,T2.0,-,-,-,-	4	
12-3	DA61-04703A	CASTER-REAR	AW-PJT,PP,-,35,NTR,35,PP+TPE	2	
12-4	DA64-02902A	CHASSIS COMP	AW2 CD,SBHG1,T1.4,-,-,-,-	1	
13	DA97-07756D	ASSY TRAY-DRAIN WATER	AW2-PJT	1	
13-1	6009-001252	SCREW-SPECIAL	PH,+,-,M4.0,L20(12),ZPC(WHT),SWRCH18A,TAPP 1,-	4	
13-2	DA63-05084A	TRAY-DRAIN WATER	AW2-PJT,PP,NTR	1	
13-3	DA63-40128A	GROMMET-SUB COND	-,NBR,-,-,-,-,-,-,DARK-GRAY	2	
13-4	DA63-40171B	GROMMET-SUCT PIPE A	-,NBR,OD20,ID4,L20,-,-,Brown,-	2	
13-5	DA97-07754C	ASSY SUPPORT-CIRCUIT MOTOR	AW2-PJT	1	
13-5-1	6003-000003	SCREW-TAPTYPE	BH,+,-,B,M4,L10,ZPC(BLK),SWRCH18A,-	2	
13-5-2	DA31-00146B	MOTOR BLDC	DRCP5030LA,1560,-,DC12V,230mA,-,-,2.7W,ATOP,-,-,-,-,-	1	
13-5-3	DA61-05357A	SUPPORT-CIRCUIT MOTOR	AW2,PP,NTR	1	
13-5-3	DA61-02355B	BRACKET-CIRCUIT MOTOR	ABS,NEXT,-,-,-,NTR,-	1	
13-5-4	DA63-01146A	GROMMET-MOTOR,REAR	A-TOP,NBR,-,-,-,ID6.5,OD42,BLK,BLDC	2	
13-5-5	DA63-40167A	GROMMET-COVER CHIL	-,SILICON,T3.0,-,L16,-,-,BLACK,-	1	
13-5-6	DA96-00042P	ASSY-HARNESS MOTOR	AW2,C-FAN	1	
13-6	DA97-05093B	ASSY PIPE-SPIRAL COND	AW2-PJT	1	
14	DA31-00010D	FAN-ASS'Y	-,ET,ZIPEL,ASSY,-,UNIT,¨∂150	1	
14-1	DA31-00015C	FAN-TURBO	-,ET-PJT,ABS+GLASS FIBE,-,GR-4010	1	
14-2	DA61-20128A	SPRING ETC-FAN	-,STS304,PI7.8,-,OD1.0,-,-,-,-,-,FD	1	
15	DA63-02017A	GROMMET COMP	QUEEN,EPDM,-,-,-,-,-,BLACK,-	4	
16	BK190CL2C/E02	COMPRESSOR	115V~60HZ,BLDC,FAN,BK-II	1	
17	DA34-00004D	RELAY PROTECTOR O/L	4TM445PHBYY-82,BK190CL2X,S/T_19.0A, U/T_4.76A,125,69	1	
18	DA63-01866A	COVER RELAY	-,NORYL,T2.0,-,-,-,SSEC,BLACK,HOOK	1	
19	DA39-00154F	WIRE HARNESS-COMP	AW2-CD,35151-0610,UL1015AWG18	1	
20	DA63-40171B	GROMMET-SUCT PIPE A	-,NBR,OD20,ID4,L20,-,-,Brown,-	1	
21	DA63-40171D	GROMMET-SUCT PIPE B	RAIL L19.5,NR,-,OD20,ID6,-,-,Brown,-	1	
22	DA62-01514B	DRYER	NEXT-PJT,C1220T,OD18.70,L114,-,-,-	1	
23	DA97-00918E	ASSY PIPE-CONNECT	AW2 TIM,TWIN I/M	1	
24-1	DA61-05348A	FIXER-HOSE	AW2 CD-PJT,PP,NTR,1/4IN	1	
24-2	DA61-05349A	FIXER-HOSE	AW2 CD-PJT,PP,NTR,5/16IN	1	
25	DA97-04049D	ASSY CAP-DRAIN	AW,ASSY,-,-,L224.5,-,FIXER_0.4g	2	
26	DA39-20389R	WIRE HARNESS-EARTH	AW-PJT,-,-,-,-,YEL/GRN,AWG#18,-,-,-,-,-,700mm,-,-,-	1	
27	DA97-04957F	ASSY COVER-NOISE FILTER	AW2-CD,-,-,-,-,-,-,-,-	1	
27-1	6002-000217	SCREW-TAPPING	TH,+,-,1,M4,L8,ZPC(WHT),SWRCH18A,-	1	
27-2	DA27-00019D	COIL FILTER-EMI	GUGGENHEIM-PJT,20mH,40m Ω,33 ±1,82*60,-,-,-,-,-25 ~ +85℃,-	1	

EXPLODED VIEW& PARTS LIST

■ Parts List of Cabinet

NO	CODE-NO	PART NAME	SPEC	QUANTITY	REMARK
27-3	DA63-03410A	COVER-NOISE,FILTER	NEXT,ABS-FR,-,-,-,-,-,BLACK,inverter	1	
27-4	3903-000400	CBF-POWER CORD	AT,US,SPT-3,HOUSING(2P)+LUG(1P),250V/10A,10A,BLK,1700mm,330mm,SPT-3 18AWGx3,UL,Y,-,-,-,-,-	1	
28	DA97-07556A	ASSY COVER-PIPE WATER	AW2-C/D-PJT,-,-,-,-,-,-,-	1	
29	DA97-07574A	ASSY COVER-COMP	AW2 CD,-,-,-,-,-,-,-	1	
30	DA97-06491A	ASSY COVER-PCB PANEL	AW2-PJT,-,-,-,-,-,-,-	1	
31	DA63-00586B	COVER-TUBE FILTER	A-TOP,PP,-,W76,L83,-,-,NTR,-	1	
32	DA62 02291B	VALVE WATER	AW09,POM,1.0~8.0K,BLUE,FLOE SENSOR	1	
33	DA61-03467A	FIXER-HOSE	AW-PJT,NY-66,-,BLACK,-	2	
34	DA41-00404D	PBA SUB-PBA INVERTER	AW2-PJT,TOP,FR-4,1.6T*148*98.5,-,110~120,50 or 60 Hz	1	
35	DA41-00617B	ASSY PCB MAIN	AW CD-PJT,ASSY CYCLE,FR-4,247*197*1.6T,MONO ICE,13V,5V,60Hz,Y,SMPS,TOP246YN	1	
36	DA97-05362C	ASSY PIPE-WATER	AW-PJT(BEST),CD,TIM	1	

5-4) Disassembly of Freezer Door

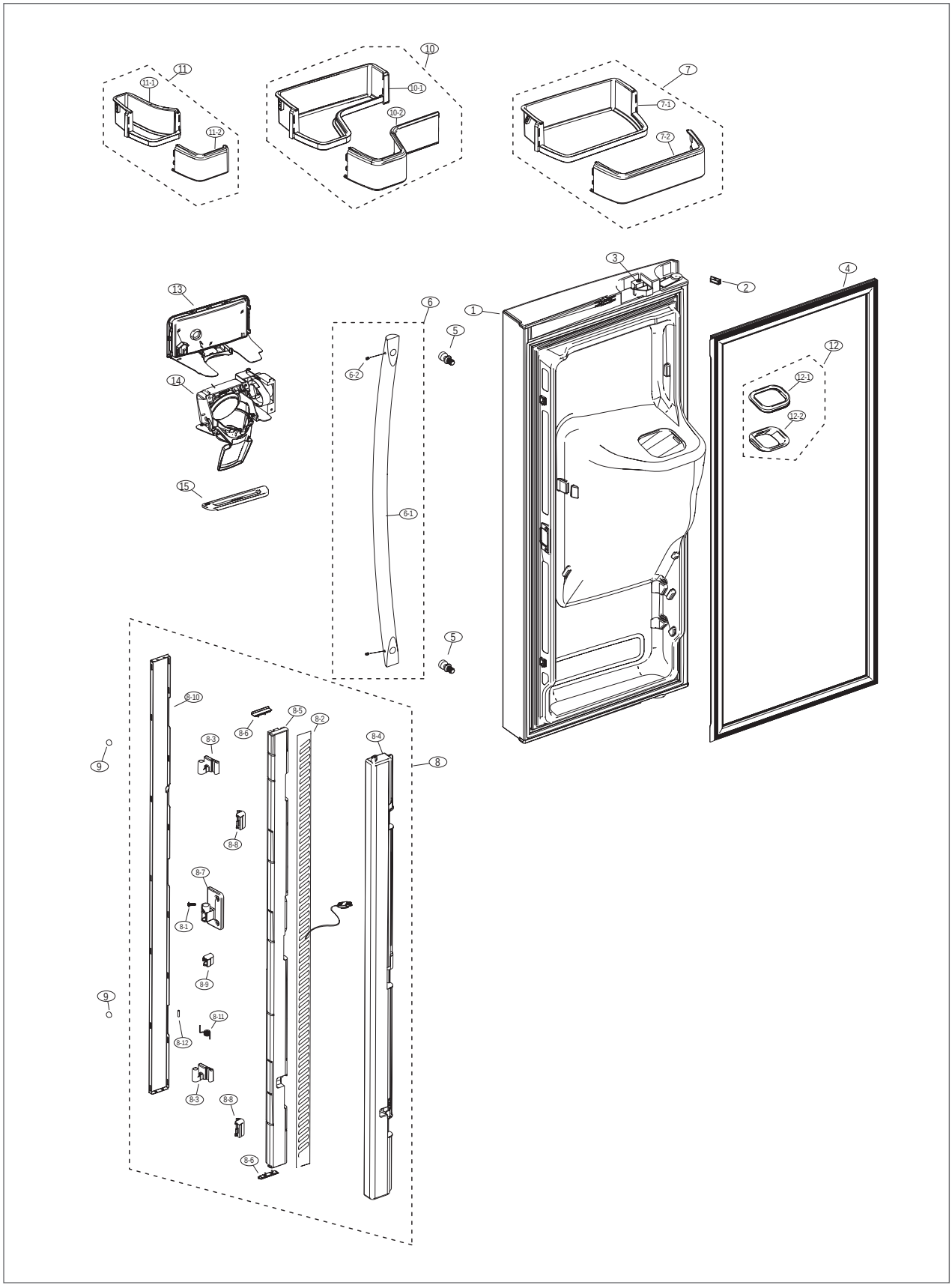


EXPLODED VIEW& PARTS LIST

■ Parts List of Freezer Door

NO	CODE-NO	PART NAME	SPEC	QUAN TITY	REMARK
1	DA91-02705E	ASSY DOOR FOAM FRE	AW2,DAC-GR0803RS(REAL STS),-,-,T0.6,#4,Un-coating,STS201(DY01CU)	1	
1-1	DA67-02055B	CAP DOOR-FRE SUB L	AW-PJT,ABS,-,-,-,CREAMY-STS,-	1	
1-2	DA67-02054B	CAP DOOR-FRE SUB R	AW-PJT,ABS,-,-,-,CREAMY-STS,-	1	
1	DA91-02705B	ASSY DOOR FOAM FRE	AW2,EMPIRE-BLACK,-,-,PCM-CLEAR,-	1	
1-1	DA67-02054A	CAP DOOR-FRE SUB R	AW-PJT,ABS,-,-,-,I-BLACK,-	1	
1-2	DA67-02055A	CAP DOOR-FRE SUB L	AW-PJT,ABS,-,-,-,I-BLACK,-	1	
1	DA91-02705C	ASSY DOOR FOAM FRE	AW2,SNOW-WHITE,-,-,SPRAY-PCM,-	1	
1-1	DA67-02054C	CAP DOOR-FRE SUB R	AW-PJT,ABS,-,-,-,SNOW-WHITE,-	1	
1-2	DA67-02055C	CAP DOOR-FRE SUB L	AW-PJT,ABS,-,-,-,SNOW-WHITE,-	1	
1	DA91-02705D	ASSY DOOR FOAM FRE	AW2,PLATINUM-INOX,-,-,VCM,-	1	
1-1	DA67-02054B	CAP DOOR-FRE SUB R	AW-PJT,ABS,-,-,-,CREAMY-STS,-	1	
1-2	DA67-02055B	CAP DOOR-FRE SUB L	AW-PJT,ABS,-,-,-,CREAMY-STS,-	1	
2	DA97-05557A	ASSY-GASKET DOOR FRE	AW-PJT,BLACK,AW NEW-SECTION,-	1	
2	DA97-05557B	ASSY-GASKET DOOR FRE	AW-PJT,GRAY,NEW SUCTION,-	1	
3	DA61-03153B	HANGER-RAIL FRONT L	AW-PJT,SECC1,T2.0,COOL-WHITE,-,-,RESTRIKING	1	
4	DA61-03155B	HANGER-RAIL FRONT R	AW-PJT,SECC1,T2.0,COOL-WHITE,-,-,RESTRIKING	1	
5	DA61-02904B	SUPPORT-DOOR POSITION,IN	AW-PJT,HIPS,-,-,-,NTR,-	2	
6	6002-000213	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC(WHT),SWRCH18A,-	5	
7	6002-000215	SCREW-TAPPING	TH,+,-,1,M4.0,L16,ZPC(WHT),SWRCH18A,-	2	
8	6006-001083	SCREW-TAPPING	TH,+,PW,-,M4,L16,ZPC(WHT),SWRCH18A,-	2	
9	DA64-02550A	HANDLE BAR-FRE	AW2-PJT,STS304,-,-,730,-,REAL-STS HAIR-LINE,EASY-HANDLE	1	
9	DA64-02552A	HANDLE BAR-FRE	AW2-PJT,BMC,-,-,730,-,BLACK,EASY-HANDLE	1	
9	DA64-02552B	HANDLE BAR-FRE	AW2,BMC,-,-,-,-,WHITE,EASY HANDLE	1	
10	DA66-00579A	SHAFT-CAP HANDLE	AW-PJT,MSWR10,108,5,-,-,ZPC3(Y)	2	
11	DA67-02056A	CAP-HANDLE FRE R	AW2-PJT,PC,-,-,-,VERSAILLES-SILVER,STS-HANDLE	1	
11	DA67-02058A	CAP-HANDLE FRE R	AW2-PJT,PC,-,-,-,I-BLACK,BMC-HANDLE	1	
11	DA67-02058B	CAP-HANDLE FRE R	AW2-PJT,PC,-,-,-,SNOW-WHITE,BMC-HANDLE	1	
12	DA67-02057A	CAP-HANDLE FRE L	AW2-PJT,PC,-,-,-,VERSAILLES-SILVER,STS-HANDLE	1	
12	DA67-02059A	CAP-HANDLE FRE L	AW2-PJT,PC,-,-,-,I-BLACK,BMC-HANDLE	1	
12	DA67-02059B	CAP-HANDLE FRE L	AW2-PJT,PC,-,-,-,SNOW-WITE,BMC-HANDLE	1	
13	DA61-05229A	SUPPORT-GUARD FRE L	AW2 CD,HIPS,-,-,-,COOL WHITE,-	1	
14	DA61-05228A	SUPPORT-GUARD FRE R	AW2 CD,HIPS,T2.0,-,-,COOL WHITE,-	1	
15	DA63-04979A	GUARD FRE	AW2 CD,HIPS,T2.5,-,-,COOL WHITE,-	1	
16	DA61-04254A	FIXER-SHAFT HANDLE L	AW-PJT,POM,-,NTR,EASY-HANDLE	2	
17	DA61-04255A	FIXER-SHAFT HANDLE R	AW-PJT,POM,-,NTR,EASY-HANDLE	2	
18	DA61-04258C	SLIDER-HANDLE FRE	AW-PJT,POM,-,-,-,CREAMY-STS,EASY-HANDLE	2	
18	DA61-04258B	SLIDER-HANDLE FRE	AW-PJT,POM,-,-,-,i-BLACK,EASY-HANDLE	2	
18	DA61-04258A	SLIDER-HANDLE FRE	AW-PJT,POM,-,-,-,NTR,EASY-HANDLE	2	
19	DA63-04247B	COVER-HANDLE FRE L	AW-PJT,ABS,-,-,-,-,CREAMY-STAINLESS,EASY-HANDLE	1	
18	DA63-04247A	COVER-HANDLE FRE L	AW-PJT,ABS,-,-,-,-,-,I-BLACK,EASY-HANDLE	1	
18	DA63-04247C	COVER-HANDLE FRE L	AW-PJT,ABS,-,-,-,-,-,SNOW-WHITE,EASY-HANDLE	1	
20	DA63-04248B	COVER-HANDLE FRE R	AW-PJT,ABS,-,-,-,-,-,CREAVY-STAINLESS,EASY-HANDLE	1	
18	DA63-04248A	COVER-HANDLE FRE R	AW-PJT,ABS,-,-,-,-,-,I-BLACK,EASY-HANDLE	1	
18	DA63-04248C	COVER-HANDLE FRE R	AW-PJT,ABS,-,-,-,-,-,SNOW-WHITE,EASY-HANDLE	1	
21	DA61-04335B	SPRING ETC-EASY HANDLE	08 AW1,2-PJT,HSWR,1.0,8,10,-,9,-,-,-,-	2	

5-5) Disassembly of Refrigerator Door Left



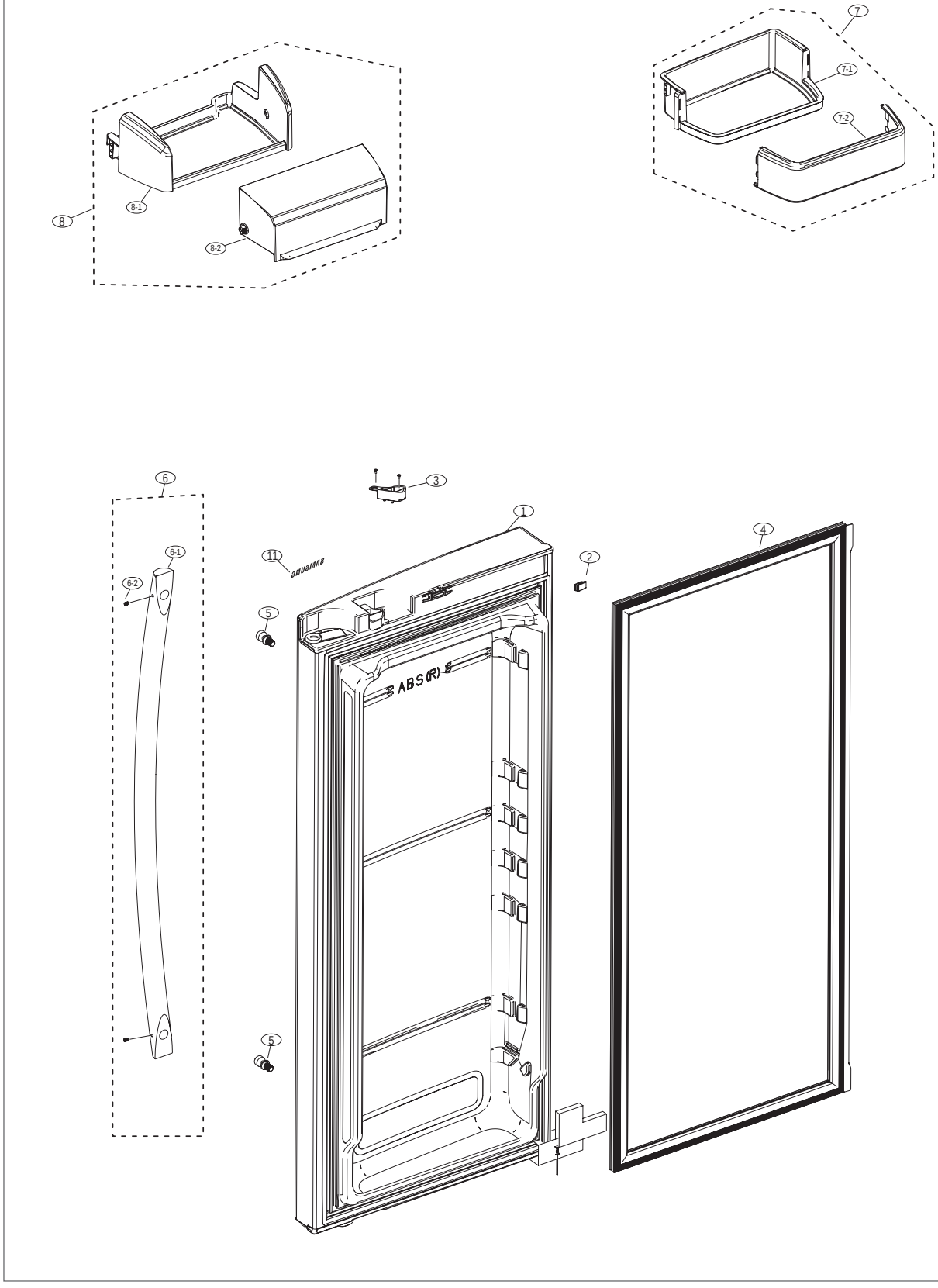
■ Parts List of Refrigerator Door-Left

NO	CODE-NO	PART NAME	SPEC	QUANTITY	REMARK
1	DA91-02703S	ASSY DOOR FOAM REF-L	RFG297AARS,STS201(DY01CU),T0.6,#4,UN-COATING,FDR,DAC-GR0803RS(REAL STS)	1	
1	DA91-02703D	ASSY DOOR FOAM-REF L	RFG297,BP,-,-,-	1	
1	DA91-02703C	ASSY DOOR FOAM-REF L	RFG297,WP,-,-,-	1	
1	DA91-02703B	ASSY DOOR FOAM-REF L	RFG297,PN,-,-,-	1	
2	DA61-02738F	MAGNET-ASSY	AW,ABS,5mm,7mm,18mm,CREAMY-STS	1	
2	DA61-02738E	MAGNET-ASSY	AW,ABS,5mm,7mm,18mm,I-BLACK	1	
2	DA61-02738A	MAGNET-ASS'Y	CORE-PJT,Strontium ferrite,T5,W7,L18,-	1	
2	DA61-02738F	MAGNET-ASSY	AW,ABS,5mm,7mm,18mm,CREAMY-STS	1	
3	DA66-00442B	CAM-AUTO CLOSE L	AW-PJT,NY6,-,-,CREAMY STS,-,-,-	1	
3	DA66-00442A	CAM-AUTO CLOSE L	AW-PJT,NY6,-,-,BLACK,-,-,-	1	
3	DA66-00442C	CAM-AUTO CLOSE L	AW-PJT,NY6,-,-,SNOW WHITE,-,-,-	1	
4	DA97-05253G	ASSY-GASKET DOOR REF	AW-PJT,GRAY,-,-	1	
4	DA97-05253D	ASSY-GASKET DOOR REF	AW-PJT,BLACK,-,-	1	
4	DA97-05253E	ASSY-GASKET DOOR REF	AW-PJT,GRAY,-,-	1	
5	DA61-03734A	FIXER-HANDLE	AW-PJT,SWRCH18A,M8,-,GE	2	
6	DA64-02568A	HANDLE BAR-REF	AW2-PJT,STS304,-,-,784,-,REAL-STS HAIR-LINE,SUS HANDLE	1	
6-1	DA64-02568A	HANDLE BAR-REF	AW2-PJT,STS304,-,-,784,-,REAL-STS HAIR-LINE,SUS HANDLE	1	
6-2	6004-001082	SCREW-SET	-,HT,-,M4,L4,PASS,STS304,-,FP	2	
6-1	DA64-02553A	HANDLE BAR-REF	AW2,BMC,-,-,784,-,BLACK,-	1	
6-2	6004-001082	SCREW-SET	-,HT,-,M4,L4,PASS,STS304,-,FP	2	
6-1	DA64-02553B	HANDLE BAR-REF	AW2,BMC,-,-,784,-,SNOW WHITE,-	1	
6-2	6004-001082	SCREW-SET	-,HT,-,M4,L4,PASS,STS304,-,FP	2	
7	DA97-07542A	ASSY GUARD-REF L	AW2 CD,-,-,-,-,-	1	
7-1	DA63-04944A	GUARD REF-L	AW2 CD,HIPS,T2.5,-,-,COOL WHITE,-	1	
7-2	DA63-04945A	COVER-GUARD REF L	AW2,GPPS,NTR	1	
8	DA97-06417E	ASSY-FRENCH	AW2,THAI-SILVER,-,-	1	
8-1	6002-000213	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC(WHT),SWRCH18A,-	1	
8-2	DA47-00245D	HEATER CORD-FRENCH	-,AW2-PJT,P-CORD,8W,-,115V,1653ß¥,-,-,FRENCH	1	
8-3	DA61-03230B	HINGE-FRENCH	AW-PJT,PC(HF-1023IM),-,-,-,COOL-WHITE(SC-02740R,-,-	2	
8-4	DA61-04286A	CASE-FRENCH	AW2-PJT,ABS,-,-,-,COOL-WHITE(SC-02740R),-	1	
8-5	DA62-01836A	INSULATION-FRENCH	AW2-PJT,FOAM-PS,-,-,-,-,-,-	1	
8-6	DA63-03508B	GASKET-FRENCH	AW-PJT,SILICON,-,W9.9,L41.1,GRAY,-,-	2	
8-7	DA63-03454B	COVER-HEATER FRENCH	AW-PJT,PC(HF-1023IM),-,-,-,-,-,COOL-WHITE(SC-02740R,-	1	
8-8	DA67-01650A	CAP-CASE FRENCH	AW-PJT,ABS,-,-,-,-	2	
8-9	DA67-01701A	CAP-CASE FRENCH MID	AW-PJT,ABS,-,-,-,-	1	
8-10	DA70-00528B	PLATE-FRENCH	AW2,EGI,-,T0.8,-,Thai Silver,-,-,Powder Coating	1	
8-11	DA81-01345A	SPRING-ETC FRENCH	STS304,PI1.4,-,-,-,-	1	
8-12	DA81-01346A	PIN-FRENCH SPRING	RD-PVC,WHITE,-,-,-,-	1	
9	DA67-30218R	CAP-SCREW	-,PP,-,-,-,SC-97527R,SNOW WHITE	2	
10	DA97-07544A	ASSY GUARD-DISPENSER	AW2 CD,-,-,-,-,-	1	
10-1	DA63-04953A	GUARD-DISPENSER	AW2 CD,HIPS,-,-,-,COOL WHITE,-	1	
10-2	DA63-04947A	COVER-GUARD DISPENSER	AW2 CD,GPPS,NTR	1	
11	DA97-07570A	ASSY GUARD REF-MID	AW2 CD,-,-,-,-,-	1	
11-1	DA63-04976A	GUARD REF-MID	AW2 CD,HIPS,-,-,-,COOL WHITE,-	1	
11-2	DA63-04977A	COVER-GUARD REF MID	AW2 CD,GPPS,NTR	1	
12	DA97-05353A	ASSY CAP-CHUTE ICE	AW-PJT(BEST),-,-,-,-,-	1	
12-1	DA63-03698A	GASKET-CAP CHUTE ICE	AW-PJT(BEST),SILICON,-,-,-,GRAY,HARDNESS:60,-	1	
12-2	DA67-01729A	CAP-CHUTE ICE	AW-PJT,ABS(HG-0760H),-,-,-,COOL-WHT(SC-02740R),-	1	
13	DA97-06521T	ASSY COVER-DISPENSER	AW2 TIM,REAL STS	1	
14	DA97-07361C	ASSY CASE-ICE ROUTE	AW2,AW2CD,AW2TIM,STS + LEVER	1	
14	DA97-05397N	ASSY CASE-ICE ROUTE	AW2,-,-,-,I BLACK,SPRAY	1	
14	DA97-05397P	ASSY CASE-ICE ROUTE	AW2,-,-,-,SNOW WHITE,SPRAY	1	

■ Parts List of Refrigerator Door-Left

NO	CODE-NO	PART NAME	SPEC	QUANTITY	REMARK
14	DA97-05397Q	ASSY CASE-ICE ROUTE	AW2,-,-,-,PLATINUM INOX,SPRAY	1	
15	DA63-03695B	TRAY-DISPENSER	AW-PJT,ABS(HG-0760H),-,-,-,-,CREAMY-STS,SPRAY:VERSAILLES SILVER	1	
15	DA63-03695A	TRAY-DISPENSER	AW-PJT,ABS(HG-0760H),-,-,-,-,I-BLACK(SC-00477R),-	1	
15	DA63-03695C	TRAY-DISPENSER	AW-PJT,ABS(HG-0760H),-,-,-,-,SNOW-WHITE,-	1	

5-6) Disassembly of Refrigerator Door Right



■ Parts List of Refrigerator Door-Right

NO	CODE-NO	PART NAME	SPEC	QUANTITY	REMARK
1	DA91-02704E	ASSY DOOR FOAM REF-R	AW2,DAC-GR0803RS(REAL STS),T0.6,#4, UN-COATING,FDR,STS201(DY01CU)	1	
1	DA91-02704D	ASSY DOOR FOAM-REF R	AW2,BP,-,-,-	1	
1	DA91-02704C	ASSY DOOR FOAM-REF R	AW2,WP,-,-,-	1	
1	DA91-02704B	ASSY DOOR FOAM-REF R	AW2,PN,-,-,-	1	
2	DA61-02738F	MAGNET-ASSY	AW,ABS,5mm,7mm,18mm,CREAMY-STS	1	
2	DA61-02738E	MAGNET-ASSY	AW,ABS,5mm,7mm,18mm,I-BLACK	1	
2	DA61-02738A	MAGNET-ASS'Y	CORE-PJT,Strontium ferrite,T5,W7,L18,-	1	
2	DA61-02738F	MAGNET-ASSY	AW,ABS,5mm,7mm,18mm,CREAMY-STS	1	
3	DA66-00441B	CAM-AUTO CLOSE R	AW-PJT,NY6,-,-,CREAMY STS,-,-,-,-	1	
3	DA66-00441A	CAM-AUTO CLOSE R	AW-PJT,POM,-,-,BLACK,-,-,-,-	1	
3	DA66-00441C	CAM-AUTO CLOSE R	AW-PJT,NY6,-,-,SNOW WHITE,-,-,-,-	1	
4	DA97-05253E	ASSY-GASKET DOOR REF	AW-PJT,GRAY,-,-	1	
4	DA97-05253D	ASSY-GASKET DOOR REF	AW-PJT,BLACK,-,-	1	
4	DA97-05253E	ASSY-GASKET DOOR REF	AW-PJT,GRAY,-,-	1	
5	DA61-03734A	FIXER-HANDLE	AW-PJT,SWRCH18A,M8,-,GE	2	
6	DA64-02568A	HANDLE BAR-REF	AW2-PJT,STS304,-,-,784,-,REAL-STS HAIR-LINE,SUS HANDLE	1	
6-1	DA64-02568A	HANDLE BAR-REF	AW2-PJT,STS304,-,-,784,-,REAL-STS HAIR-LINE,SUS HANDLE	1	
6-2	6004-001082	SCREW-SET	-,HT,-,M4,L4,PASS,STS304,-,FP	2	
6-1	DA64-02553A	HANDLE BAR-REF	AW2,BMC,-,-,784,-,BLACK,-	1	
6-2	6004-001082	SCREW-SET	-,HT,-,M4,L4,PASS,STS304,-,FP	2	
6-1	DA64-02553B	HANDLE BAR-REF	AW2,BMC,-,-,784,-,SNOW WHITE,-	1	
6-2	6004-001082	SCREW-SET	-,HT,-,M4,L4,PASS,STS304,-,FP	2	
7	DA97-07541A	ASSY GUARD-REF R	AW2 CD,-,-,-,-,-	2	
7-1	DA63-04943A	GUARD REF-R	GUARD REF R,HIPS,T2.5,-,-,COOL WHITE,-	1	
7-2	DA63-04945A	COVER-GUARD REF L	AW2,GPPS,NTR	1	
8	DA97-07543A	ASSY GUARD-DAIRY	AW2 CD,-,-,-,-,-	1	
8-1	DA63-04948A	GUARD-DAIRY	AW2 CD,HIPS,T2.5,-,-,COOL WHITE,-	1	
8-2	DA63-04954A	COVER-GUARD DAIRY	AW2 CD,GPPS,T2.5,NTR	1	
11	DA64-01985A	MASCOT	SBS,AL,T1.6,-,L90,Fixing-type,Siver,forging	1	

6. PCB DIAGRAM

6-1) PCB LAYOUT WITH PART POSITION 121

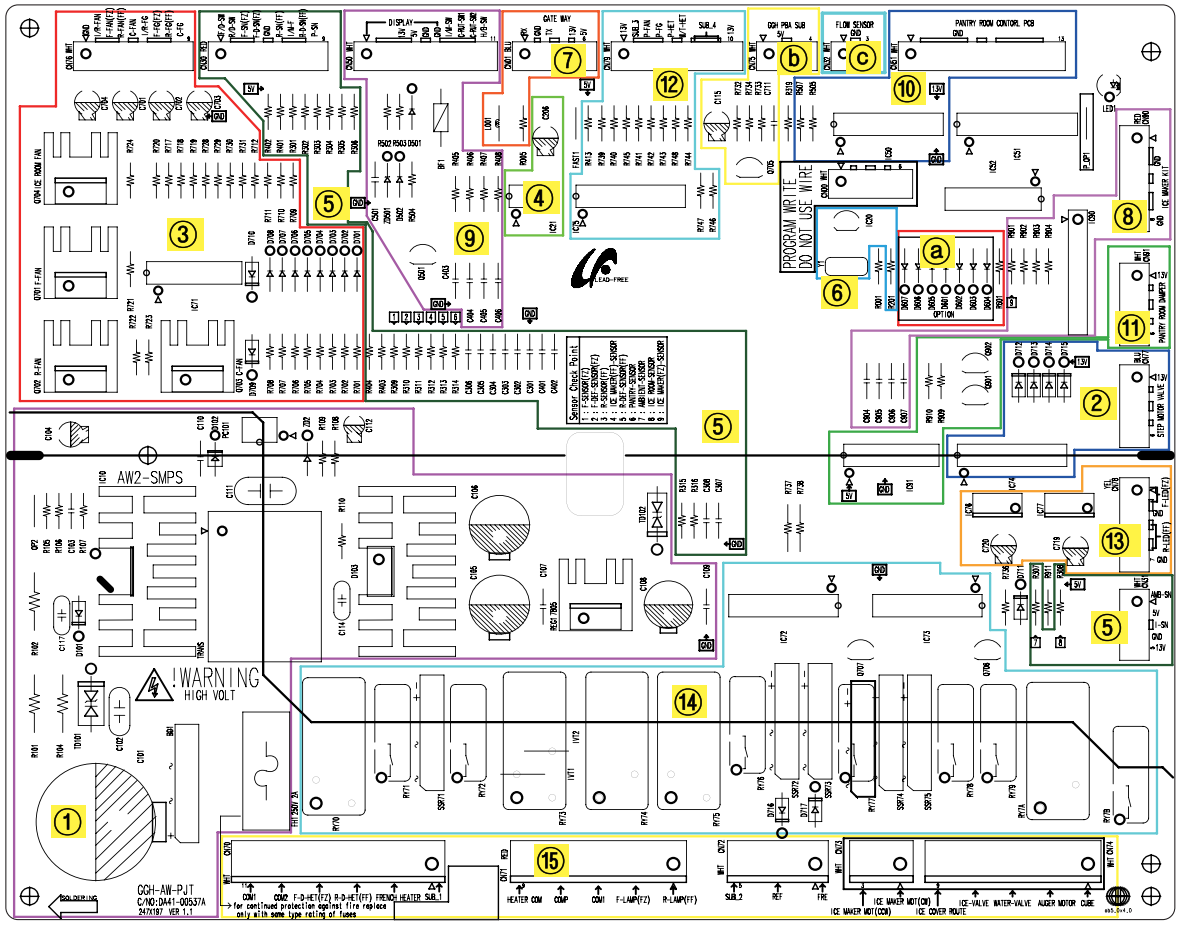
6-2) PCB LAYOUT WITH PART POSITION (SMPS BOARD) 122

6-3) CONNECTOR LAYOUT WITH PART POSITION (MAIN BOARD) 123

6-4) CONNECTOR LAYOUT WITH PART POSITION (SMPS BOARD) 125

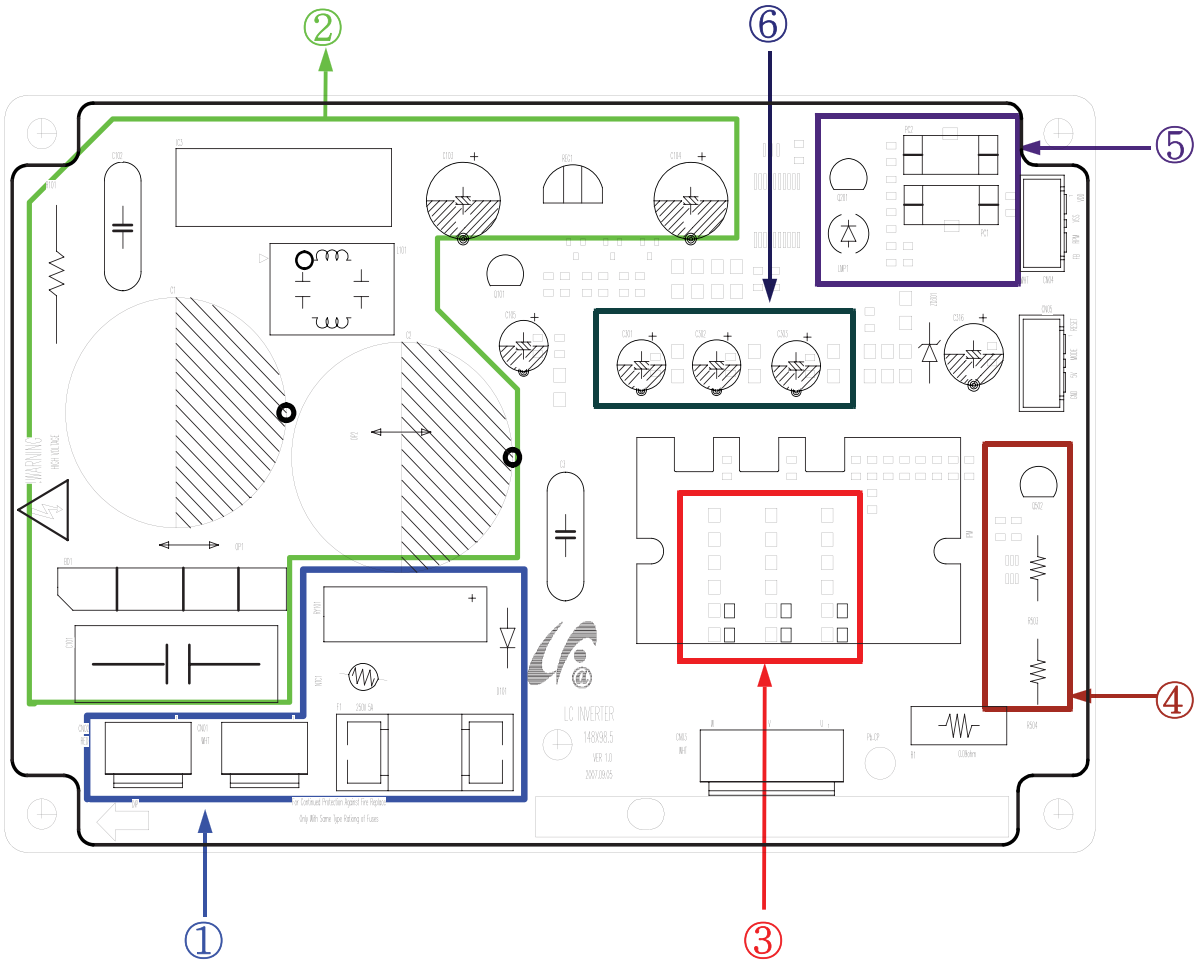
PCB DIAGRAM

6-1) PCB Layout with part position



1. DC13V, 5V, GND supplied from SMPS PCB
2. Circuit for controlling Step-Valve (3-Way Valve) * Option
3. FAN MOTOR control part : To supply the power from 8.3V ~ 12V according to the motor types. (F,R,C,ICE)
4. EEPROM : Save and record every kinds of data.
5. Transmit inputted signals from every sensor into MICOM after eliminate the noise.
6. Micom : control the regrigerator Ceramic resonator : generate the basic frequency of Micom operation.
   Reset IC : make Micom reset if input voltage of Micom is detected less than the specified voltage
7. PLC input/output
   - PLC (Power Line communication) * Option(PLC module is not inserted unless specified occasion)
8. Operate ICE-MAKER, supply power to MOTOR, and sense the variation of switch.
9. Main Micom ↔Panel Micom serial communication circuit
   - Dispenser option input part (Water & Cover Ice route switch)
10. Pantry room display control part : display LED, detect KEY state.
11. Control Pantry room damper & Damper heater
12. Water Tank Heater Controls (also controls other options)
13. LED LAMP Control Circuit (F, R LAMP)
14. Relay parts that controls AC load and receives Micom operating signal through Sink IC.
15. Connector with AC load
    a. Diode option setting area
    b. Inverter COMP controlling signal
    c. Flow Sensor. sensing part

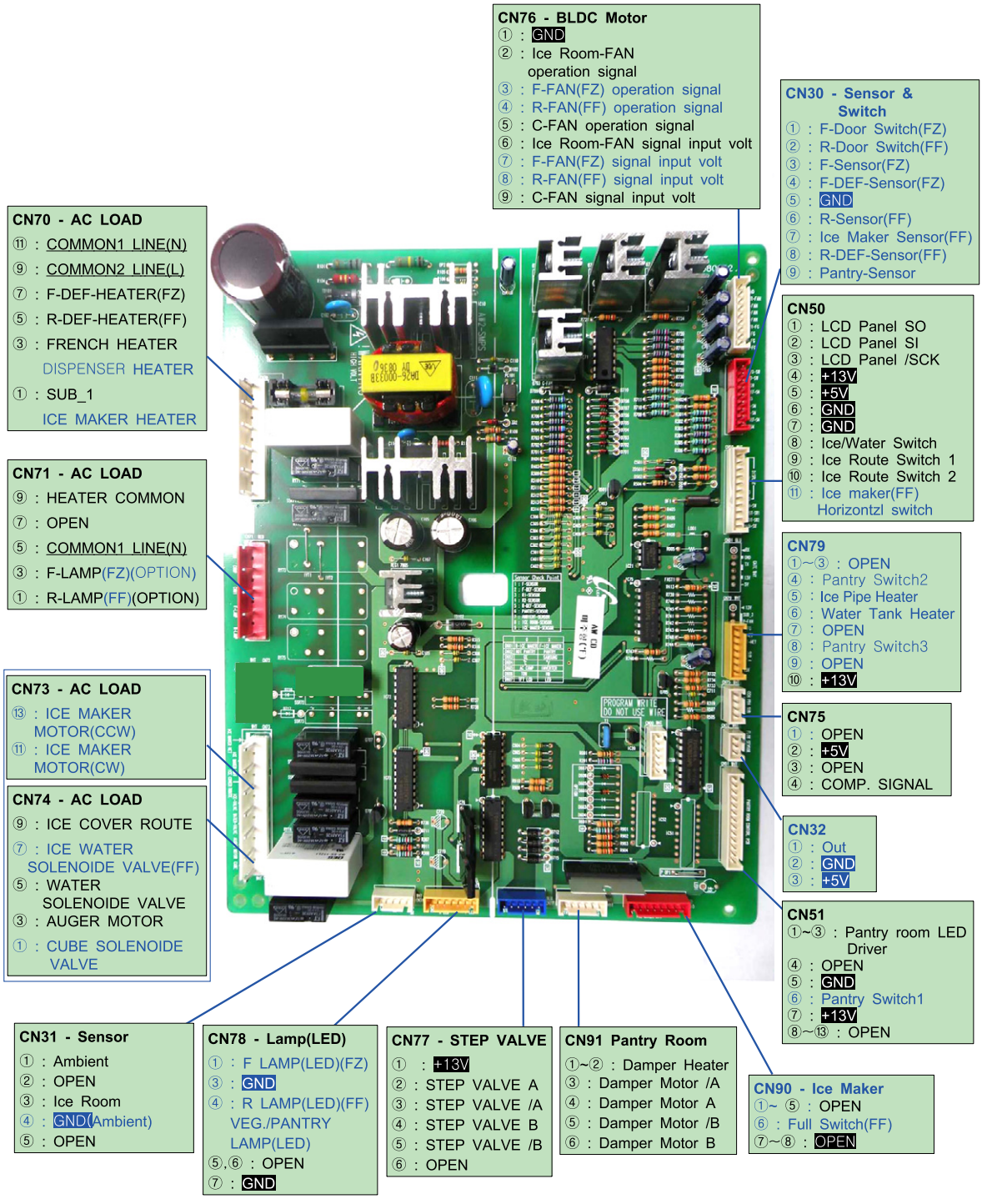
6-2) PCB Layout with part position (SMPS Board)



1. Inrush current protecting area : It prevents an instant inrush of current generated in condenser when plug in.
2. PCB Power Bus : power bus (Hybrid IC). It supplies DC15V and 5V to MICOM.
3. Location detecting resistance area : It detects motor location through the current detected.
4. Current detecting area : It detects the current from the SHUNT resistance and controls PWM DUTY.
5. COMP operating Signal area : It receives COMP operating signal from Main PCB and conduct it.
6. BOOTSTRAP live part : Charging circuit that 1GBT of SPM can On/Off securely.

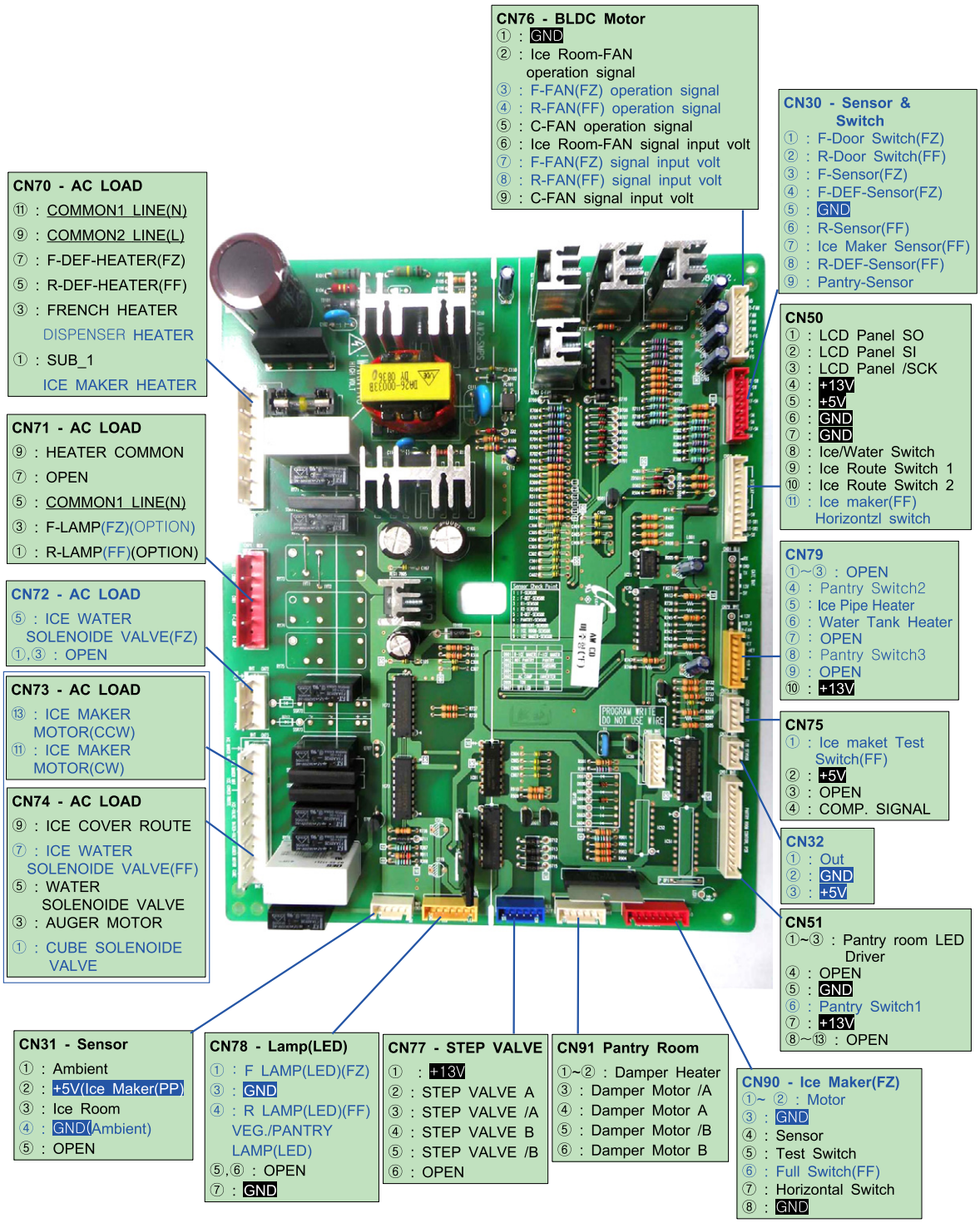
6-3) Connector Layout with part position (Main Board)

6-3-1. RFG237*AA**



6-3) Connector Layout with part position (Main Board)

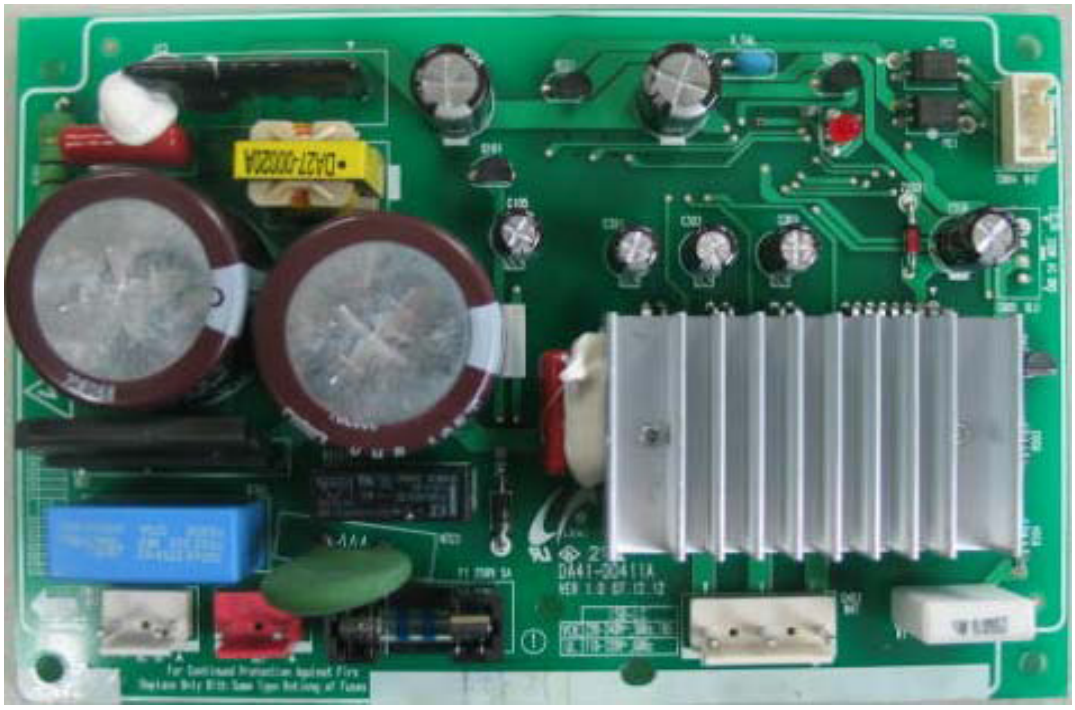
6-3-2. RFG238,9*AA**



PCB DIAGRAM

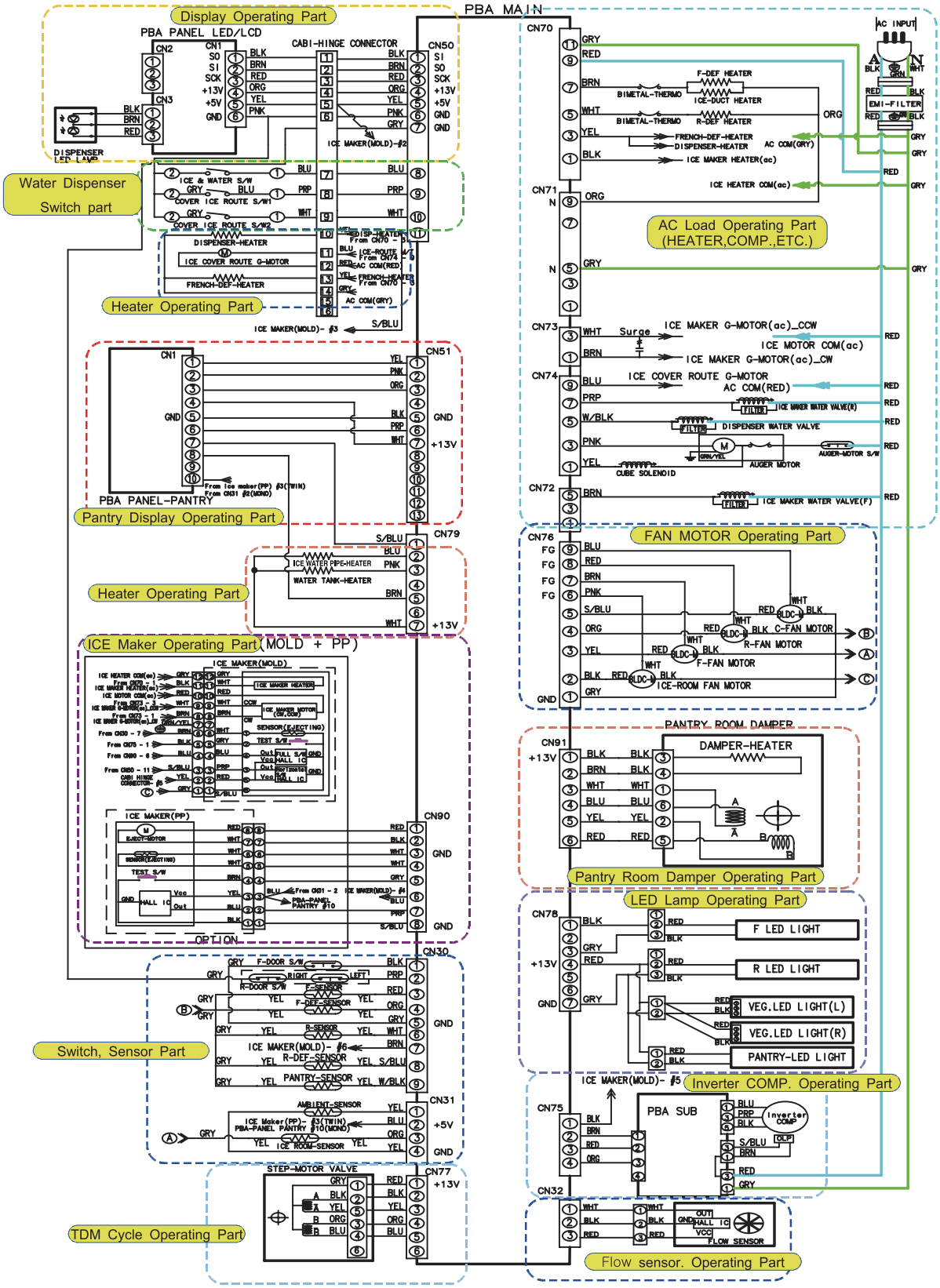
6-4) Connector Layout with part position (SMPS Board)

6-4-1. RFG23**AA**



7. WIRING DIAGRAM

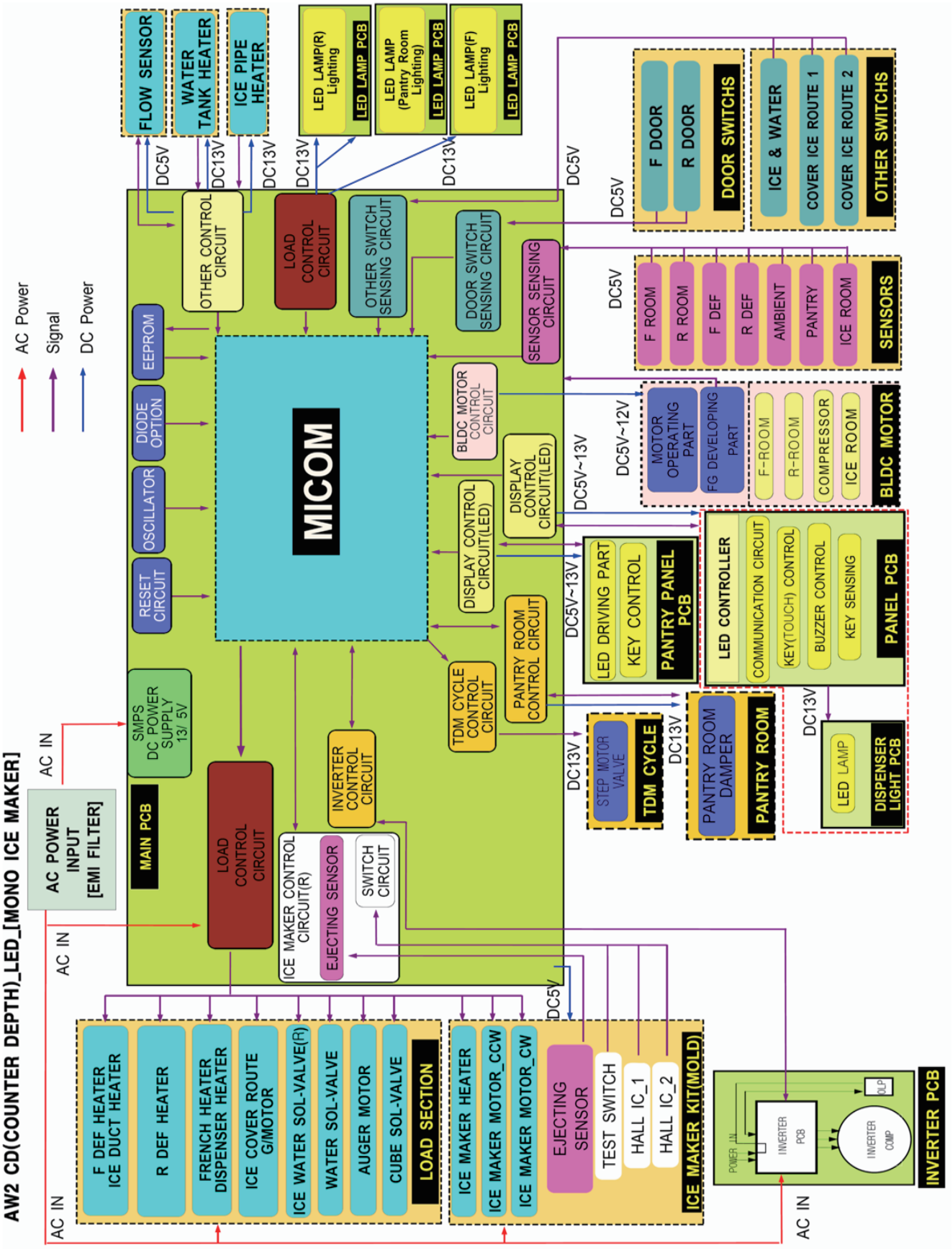
7-1) Model : RFG23**



8. SCHEMATIC DIAGRAM

8-1) Whole block diagram

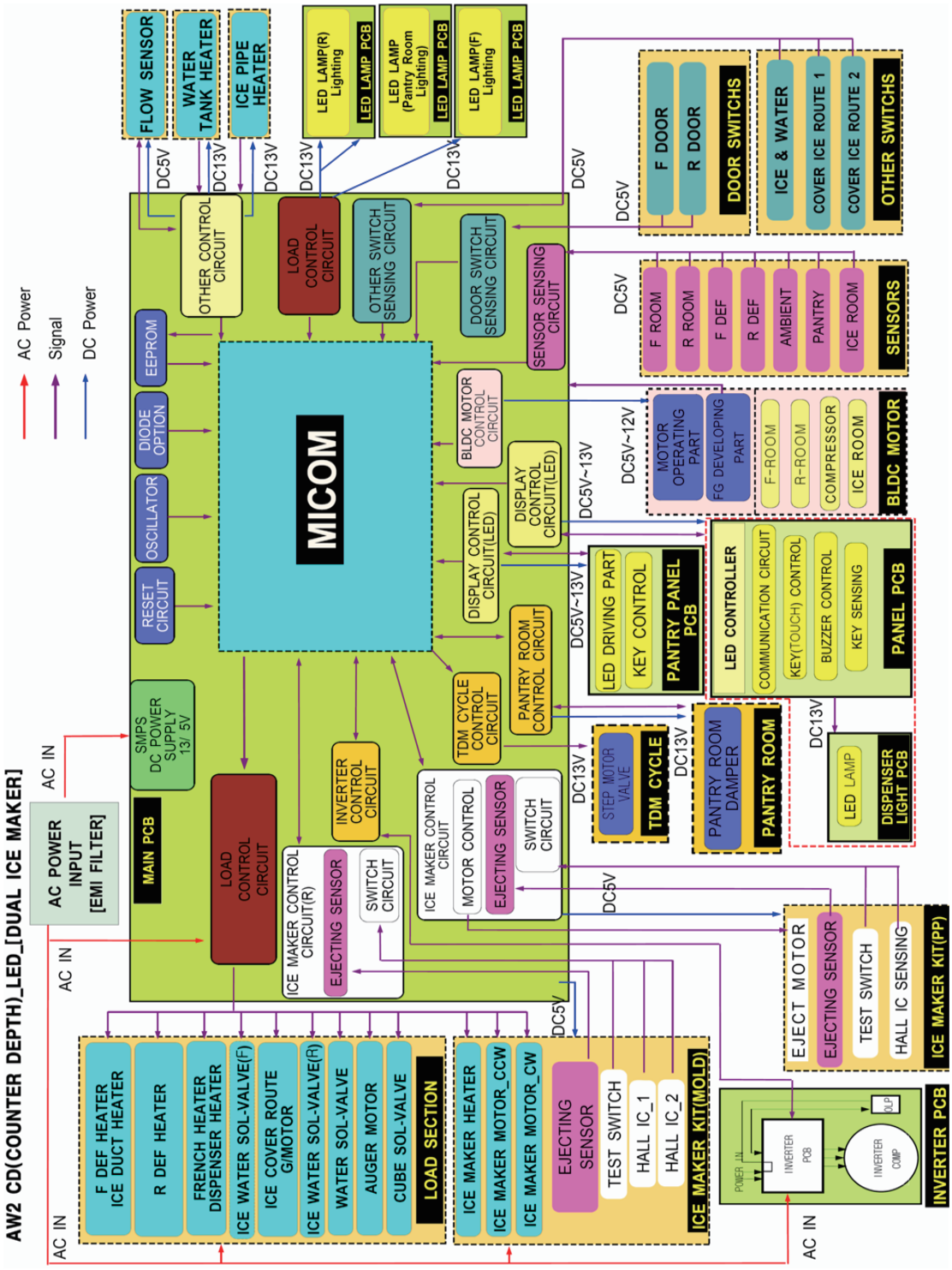
8-1-1. MODEL : RFG237**



8. SCHEMATIC DIAGRAM

8-1) Whole block diagram

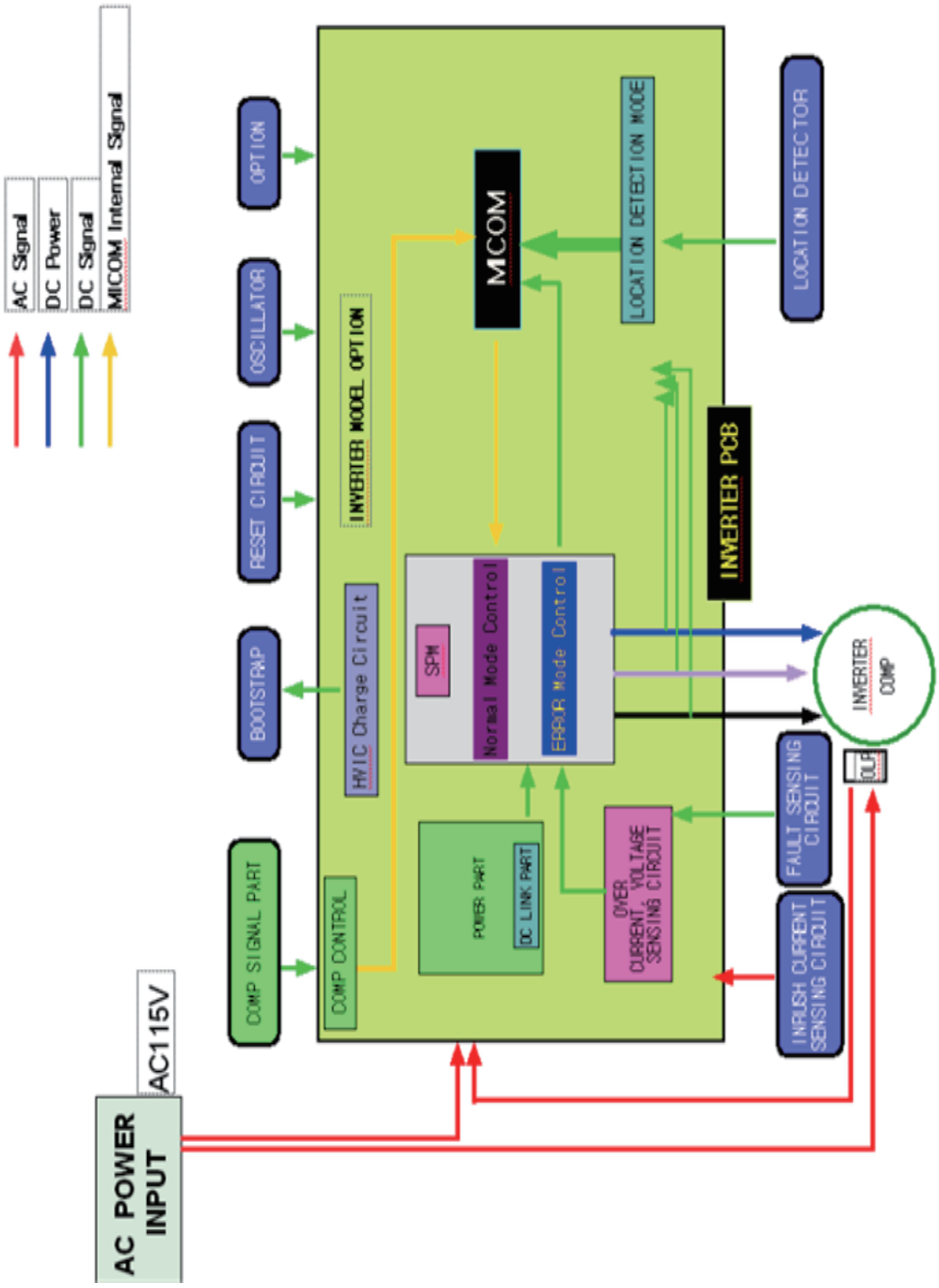
8-1-2. MODEL : RFG238**



8. SCHEMATIC DIAGRAM

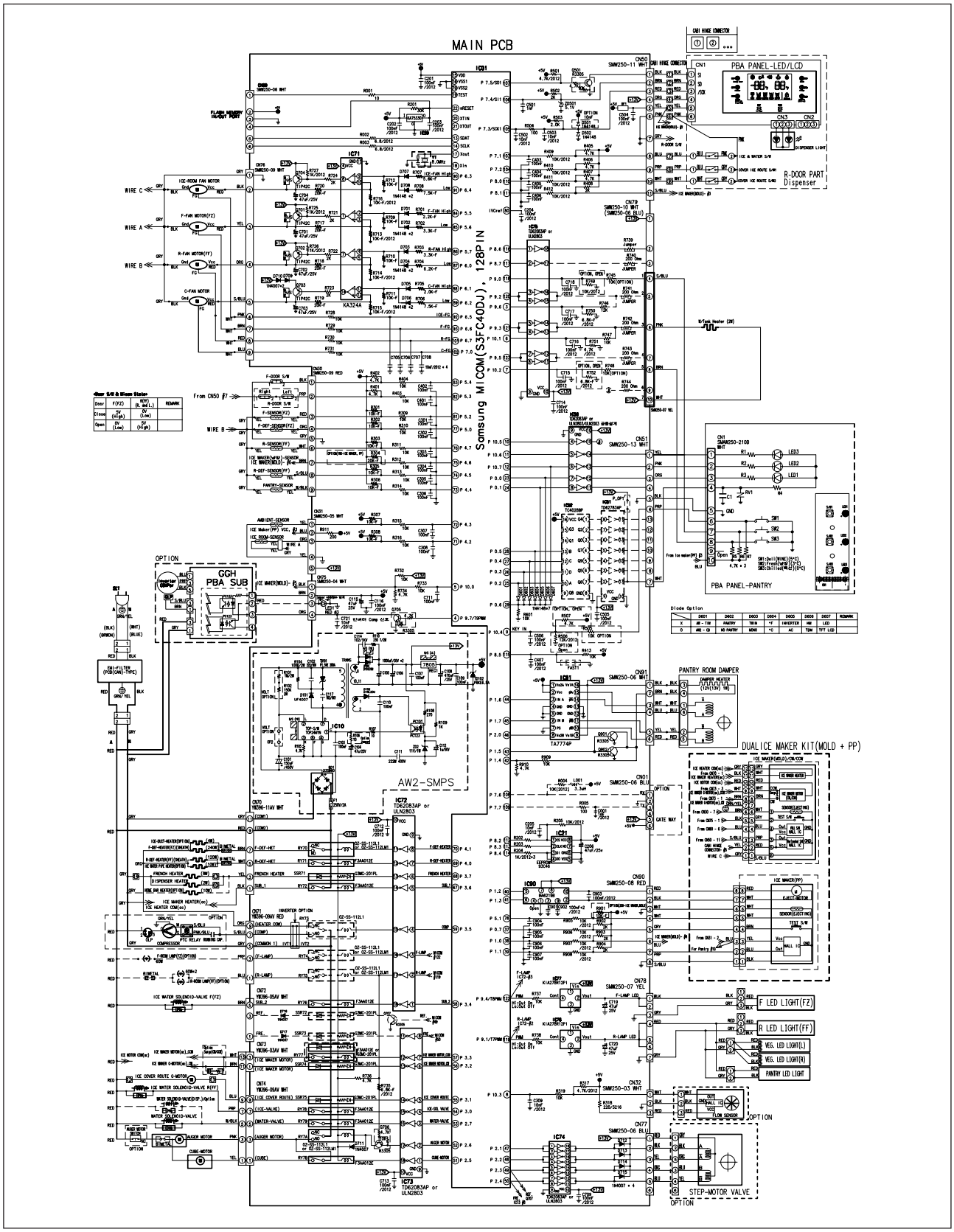
8-1) Whole block diagram

8-1-3. MODEL : RFG23***



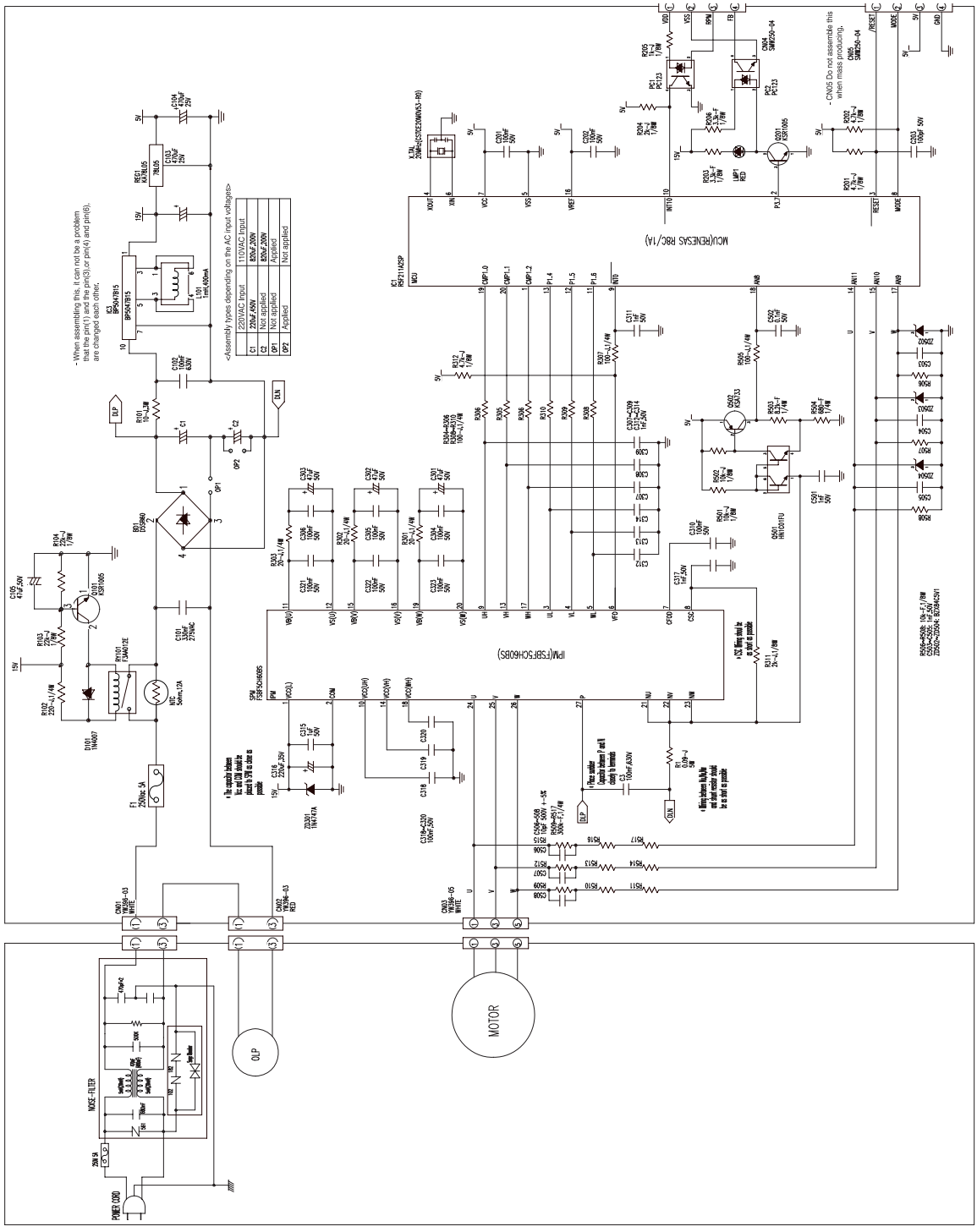
8-2) CIRCUIT DIAGRAM

8-2-1. Main

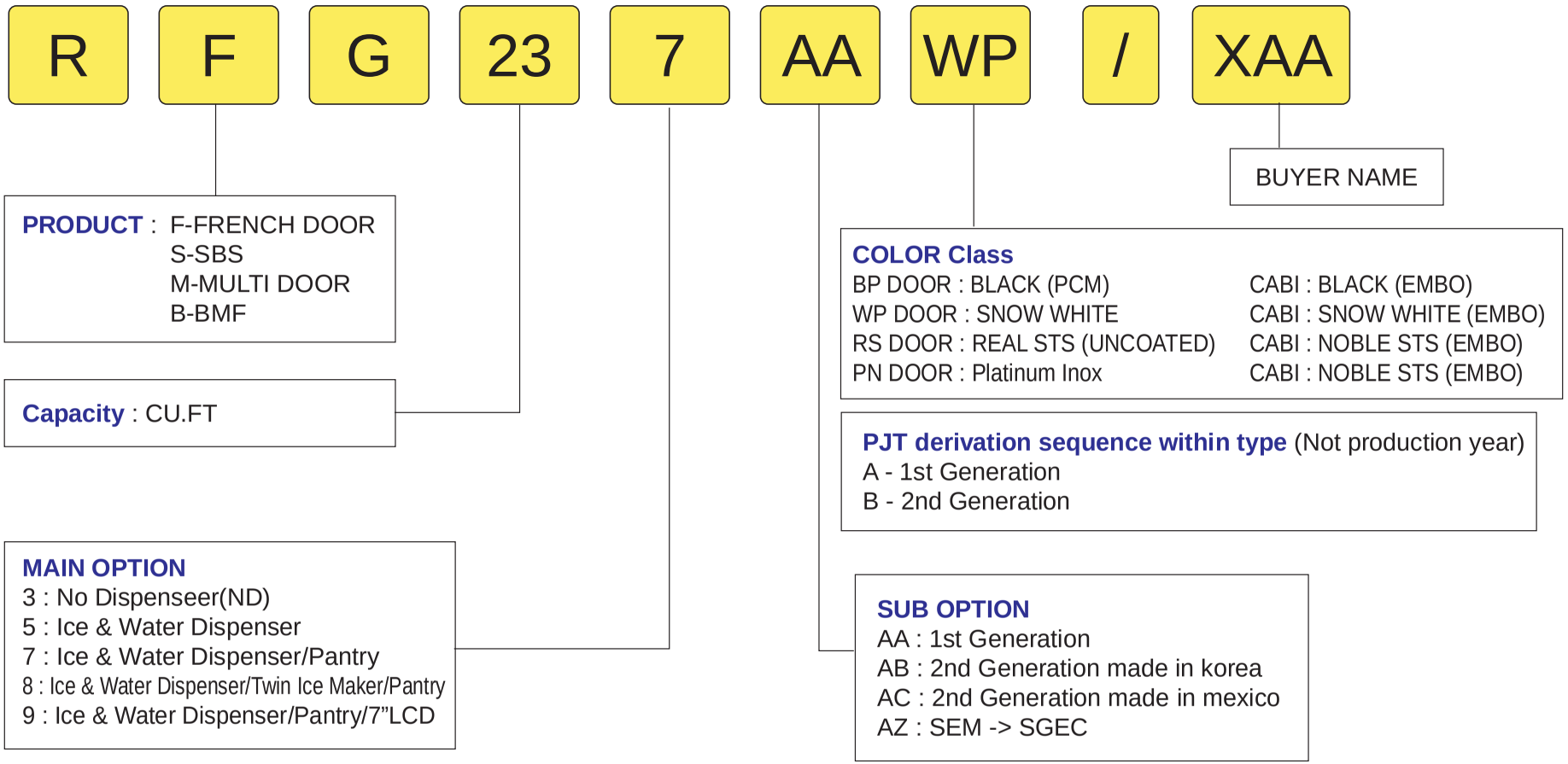


8-2) CIRCUIT DIAGRAM

8-2-2. INVERTER



Model name


R
F
G
23
7
AA
WP
/
XAA
BUYER NAME
PRODUCT : F-FRENCH DOOR
S-SBS
M-MULTI DOOR
B-BMF
Capacity : CU.FT
COLOR Class
BP DOOR : BLACK (PCM)
WP DOOR : SNOW WHITE
RS DOOR : REAL STS (UNCOATED)
PN DOOR : Platinum Inox
CABI : BLACK (EMBO)
CABI : SNOW WHITE (EMBO)
CABI : NOBLE STS (EMBO)
CABI : NOBLE STS (EMBO)
PJT derivation sequence within type (Not production year)
A - 1st Generation
B - 2nd Generation
MAIN OPTION
3 : No Dispenseer(ND)
5 : Ice & Water Dispenser
7 : Ice & Water Dispenser/Pantry
8 : Ice & Water Dispenser/Twin Ice Maker/Pantry
9 : Ice & Water Dispenser/Pantry/7”LCD
SUB OPTION
AA : 1st Generation
AB : 2nd Generation made in korea
AC : 2nd Generation made in mexico
AZ : SEM -> SGEC

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